

AMAZING.. STARTLING

WIRELESS CONTROL FOR ANY RADIO

WITH KADETTE *Tunemaster*

FROM KITCHEN

..DINING ROOM

..BED ROOM

WIRELESS CONTROL

NO CONNECTIONS

REAL REMOTE CONTROL

FROM ANY ROOM

↑ ANY RADIO

Retails for
\$25⁰⁰
COMPLETE

Special
End-of-Year
Double Issue!



JOURNAL OF THE
**CALIFORNIA HISTORICAL
RADIO SOCIETY**

FOR THE RESTORATION AND PRESERVATION OF EARLY RADIO

CHRS OFFICERS AND STAFF

PRESIDENT/ MAIL PICK-UP

Steve Kushman
4233-25th. St.
San Francisco, CA 94114
415 821-7671

VICE PRESIDENT/ PUBLICITY CHAIRMAN

Lee Allder
P.O. Box 6785
San Rafael, CA 94903
415 499-9228

SECRETARY

Russ Turner
414 Liberty St.
San Francisco, CA 94114
415 824-8367

TREASURER

Will Jensby
645 Giannini Dr.
Santa Clara, CA 95051
408 296-6071

MAILING LABELS

Hal Layer
P.O. Box 27676
San Francisco, CA 94127
415 661-6958

BOARD MEMBER

Mike Adams
112 Crescent Court
Scotts Valley, CA 95066
408 439-9544

BOARD CHAIRMAN/ MAILING CHAIRMAN

Dale Sanford
107 St. Thomas Wy.
Tibouron, CA 94920
415 435-6131

ON SITE EVENT CHAIRMAN

Paul Bourbin
25 Greenview Ct.
San Francisco, CA 94131
415 648-8489

WEBSITE CHAIRMAN

Alan Voorhees
10809 McIntyre St.
Oakland, CA 94605
510 562-3235

MEMBERSHIP CHAIRMAN

Mike Simpson
21818 Via Regina
Saratoga, CA 95070
408 867-7315

BOARD MEMBER

John Eckland
969A Addison Ave.
Palo Alto, CA 94301
415 323-0101

BOARD MEMBER

John Wentzel
1609 Irving St.
San Francisco, CA 94122
415 731-1920

GENERAL COUNSEL

Bart Lee
88 Kearny St. #1301
San Francisco, CA 94108
415 956-5959

NAME BADGE CHAIRMAN

Norm Lehfeltdt
757 Guerrero St.
San Francisco, CA 94110
415 285-0643

TECHNICAL ADVISOR

Larry Clark
438 York Dr.
Benicia, CA 94510
707 745-9132

JOURNAL STAFF: EDITOR

Alan Voorhees

CONTRIBUTORS

Dale Tucker
Bart Lee

SACRAMENTO CHAPTER

Bill Howell
5724 Gibbons Street
Carmichael, CA 95608
916 487-6384

SACREMENTO CHAPTER

Don Steger
4821 Rockland Way
Fair Oaks, CA 95628
916 967-4630

ABOUT CHRS

The California Historical Radio Society (CHRS) is a non-profit corporation chartered in the State of California. CHRS was formed in 1974 to promote the restoration and preservation of early radio and broadcasting. Our goal is to provide the opportunity to exchange ideas and information on the history of radio, particularly in the West, with emphasis in collecting, literature, programs, and the restoration and display of early equipment.

The *Journal* of the Society is published and furnished free of charge to members. Yearly membership dues are \$20 (U.S. funds).

Submissions for the *Journal* are always welcome. Typed copy is preferred, submitted on a 3.5 inch IBM or Macintosh diskettes in ASCII or Microsoft Word format. Send all material to Alan Voorhees and include your name, address, and phone number. You write about radio and we'll print it.

©1996 California Historical Radio Society. All rights reserved. No part of this publication may be reproduced in any form, or by any means, without prior written permission from CHRS, except that you may make "fair use" of quotations of text fully attributed by you to the source (this *Journal*) and the author.

CHRS

P.O. Box 31659
San Francisco, CA 94131
415 821-9800

CHRS on the Internet:

<http://www.antiqueradios.com/chrs/>

ON THE COVER

1939 ad for International Radio's Kadette
"Tunemaster" wireless remote for any radio.

NEWS AND INFORMATION...FROM THE PRESIDENT

Steve Kushman

NEWS:

1998 Renewals

It's that time of year again! Your dues for 1998 are due and payable. Please take the time to fill out the handy renewal form. (It's the first page of this Journal.) Send it back as soon as possible, (no later than February 15th), if you want to receive the March edition. Remember, if you try to sell at one of our events and your dues aren't current, it will cost you \$25. This form also has spaces for your free ad, repair specialties, name badge orders, and comments. Fill it out completely and send it back now!

Hints and Kinks Update

It's Here! CHRS Hints and Kinks (Twenty Years of CHRS), is back! Apologies to those members who had to wait for their copy. **The wait was worth it!** The New **Hints and Kinks** is nothing like the old. It has been reviewed, edited, reformatted, and turned into an invaluable guide to anyone serious about repairing and restoring antique radios. The cover art is outstanding, and reflects the creativity of our editor **Alan Voorhees**. The New **Hints and Kinks** is available to those members who have lost their old copies or wish to purchase the updated version. They will be for sale at our events, at the special reduced price for members of \$10. You can order them through the mail but send an extra dollar for postage. Remember to tell your friends that **Hints and Kinks** comes free as part of new memberships. Also, we have a limited number of back issues of the CHRS Journal. They will be available at our events for \$5.

++Positives++

We would like to thank **Barbara and Bob Coulam**, for the donation of items, for auction, from their late son, **Steve Coulam's** estate. **Steve Coulam** was the Chief Engineer at KOFY-TV, Ch. 20. I didn't know **Steve**, but we had a few things in common, besides our first names. We both started in radio and moved to television. We were both engineers at Ch. 20. **Steve** loved to tinker, and so do I. And when I walked into his house... both pack rats! The auction was held at our Foothill meet, August 2nd, and I'm pleased to report, we raised \$3000, half of which, went to CHRS, at the request of the **Coulam Family**.

The highlight of the auction was an RCA CT-100. This is the first commercially produced color television (1954). Thanks for the high bid from **John Staples**, who had been looking for this set for a long time. **John** is a very happy collector. It was important to the **Coulams**, that the gear found its way into the hands of people who would respect, and take care of it. Thanks to our members, we took care of that. Also my thanks to **Paul Bourbin**, **Stephan Ponek**, **Ekkehart Wilms**, and **Jeff Hollinger** for their help on this project. To **Barbara and Bob Coulam**, we are sorry for your loss. We thank you again for the donations and wish you all the best for the future.

—Negatives—

I hope not to have to write under this heading too often, but. During the August, Foothill meet, I had two Sonitone, transistorized hearing aids, liberated from my table, while I was away, doing Club business. Also, one of our transistor radio collectors has reported sets stolen at a previous meet. As members of the same Club, with common interests, trust is very important. Members should feel comfortable, leaving their tables at our events. Remember sellers need to acquire also. To the person with the Sonitones in his pocket. If you wanted hearing aids, enjoy them. If you thought they were transistor radios, ha, ha, fooled you! If you wanted to take value in a small package, there were two #50 tubes about two feet away. OK, enough said... OOPS! One more item. **Frank Camenish** reports that a Radiograph, three dial battery set, (Serial #S581), and a Radiola 100A speaker were stolen from his cabin in Placer Co. If you see these items or someone tries to sell them to you, please call **Frank** at 415 453-9090.

Refreshments Anyone?

I am pleased to report that we now have, Commissioners of Coffee, Deliverers of Doughnuts and Sellers of Soda, (and juice). And its all done with Love! That's **Lynn and Martin Love**, who will have these items available at our events. No more will I hear, "Where's the coffee?!" Thanks, **Lynn and Martin**, and keep up the good work.

Lifetime Member

Don Kojane, President of the **Perham Foundation**, has joined CHRS as a Lifetime Member. We welcome **Don**, and thank him for his commitment to our organization. **Don** joins fellow Lifers, **Norm Berge**, **Paul Bourbin**, **Adam Schoolsky**, **Dale Sanford**, **Robert Hope** and **Norman Leal**.

Service Guide

The **HOTLINE** receives many calls from people who want to get radios, auto radios, televisions, transistors, or phonos, (wind-ups and electric) repaired or restored. Sometimes it's easy to refer them. Sometimes it's not. Sometimes they are looking for service in a specific location in the Bay Area or the State. We would like to compile a **Service Guide**, composed of members who take in repair or restoration work. It will cost you nothing to be listed if you are a current member. Just send your name, address, phone number and your repair specialties to: **CHRS, P.O. Box 31659, S.F. CA, 94131**. Or leave the information on the **HOTLINE**. **415 821-9800**... This is the same request that ran in the last Journal. I'm not pleased to report that only five people responded, out of five hundred members! I'm sure that there are many members who would like to be listed in this guide. It's easy, just write us, call the **HOTLINE** and leave a message or fill in item #9 on the provided renewal form.

Hotline

Remember, the CHRS **HOTLINE**, **415 821-9800**. Check the **HOTLINE** for the latest and best information or any changes involving our events. Since we are in the rainy season, please check the **HOTLINE** the morning of the event for rain cancellation. Use the **HOTLINE** to register your repair or restoration specialty.

On the Web

Our web site continues to be a very popular place to visit on the internet. Its snappy graphics and valuable information make it a must visit site. You can examine radios, hear vintage radio programs, read articles from the CHRS Journal, see radios for sale and much more. Also the number of radio related links to other sites is growing. This site is maintained by our Web Site Chairman and Journal Editor, **Alan Voorhees**. When

you see this super member, shake his hand thank him for the great job he is doing! Our web site address is:

<http://www.antiqueradios.com/chrs/>
Visit often!

Journal

We need more articles for the Journal. We need more articles for the Journal. We need more articles for the Journal. The preceding is not a misprint. It's to express the seriousness of this situation. Everyone says that this Journal is great. Well, it is. And what keeps it great is contributions of articles from our members. We are running out. The Journal won't be so great if it's full of nothing but old magazine reprints. How about writing down that article you've always talked about. Now is a good time. Since the popularity of transistor radios continues to grow, it would be great to have articles or a regular column about them. Who of our veteran transistor collectors is ready to accept this challenge? What about articles on antique phonographs? My favorite radio. My favorite television set. My most memorable restoration job. How to restore a specific set. Tips for displaying collections. Tips on repairs. This is my collection. You get the idea, start writing! And send in plenty of pictures. Thanks to all who placed want ads and keep them coming. Remember they are free to current members. If you want your ad canceled, please let us know. As always, thanks to Alan Voorhees for an outstanding job as our editor.

Name Badges

Norm Lehfeldt, our Badge Chairman, reports orders for the new Plastic Name Badges are brisk. This attractive new and improved badge features our favorite "Sky Terrier" logo and now features 3 lines of type! Also the first 2 lines have larger type, making this badge easy to read. All these improvements cost you only 25 cents more. Send your check for \$7 along with your 3 lines of information to: CHRS, P.O. Box 31659, S.F. CA 94131. Show your support for CHRS by ordering a new badge today!

Technical Reprint Service

Our Technical Advisor, Larry Clark, continues to offer reprints of schematics or other materials from the CHRS Library. Just

send a note to Larry and let him know what you need.

Enclose a self addressed stamped envelope and \$1. Mail to:

Larry Clark
438 York Dr.
Benicia, CA 94510
(707-745-9132)

Or if you need assistance with a repair project, call Larry and maybe he can help. Thanks Larry, for volunteering your time to help our members!

Presidio Project

As you may know, CHRS is involved with the Perham Foundation, in a project to restore the original radio station buildings in the historic Presidio of San Francisco. The eventual goal is to have these sites restored to original condition, display working historical gear, to possibly have a home for the Perham Foundation's Electronic Museum and to possibly build the California Historical Radio Society Museum. The CHRS Museum would not only contain radios, but other historically related media, such as phonographs, hi-fi equipment, historical audio gear, microphones, wireless gear, etc. At this time we are awaiting the placement and the startup of the Presidio Trust who will oversee all development in the park. We will then resubmit the paperwork to get the ball rolling again on this project. See Bart Lee's article for the latest.

Museum Fund

Thanks to all who continue to donate to the Presidio Museum Fund. The Fund stands at a little over \$1000. Thank you all. Keep the donations coming.

Foothill Procedures

For the last couple of events at Foothill College, we have tried to let sellers drive in and park themselves, then collected the fees later. This procedure didn't work too well. Starting with the February 7th meet, we'll be going back to the old system. Sellers should turn right into Lot "D", check in, pay your fees, then Paul Bourbin will direct you to your space. Remember, we will be checking sellers for current membership. If it's not current and you want to sell, be prepared to pay \$25. The other concern we've had, is that people have been putting up tables and

starting to set up before 8am. (This does not apply to the CHRS table, which has Club information on it, and the coffee and doughnut table.) We have established a start time for these events to make it fair for all, especially for people coming from great distances. And, many other clubs now use this procedure. If we continue to have people who jump the gun, we will unfortunately for all, line up the cars and not open the lot before 8am. No one wants to do this. So, PLEASE, leave your vehicles closed until 8am. Thanks for your cooperation.

End of the Year Ramblings

Another year has come and gone faster than a 20 dollar Catalin. I hope everyone found a lot of items on their "want lists" in 1997, and hope everyone has enjoyed our events. Our membership continues to hover at around 500 members. The costs of running the Club continue to increase. Insurance, printing, postage and the costs of the Foothill site are very expensive. The auctions we have had this year have helped a lot, especially when we have good items donated. What really doesn't help us, is to have the junk, that you can't give away, donated for auction. We will continue to have auctions, but please think about the good of the Club when you donate and bid.

This Club continues to run well due to the hard work of the following people:

Alan Voorhees Journal Editor and Webmaster
Dale Sanford Mailing chairman (with help from his wife, Vernelle)

Paul Bourbin On site event chairman & auctioneer

Lee Alder Vice Pres. & publicity chairman

Bart Lee Our general counsel

Will Jensby The Treasurer

Norm Lehfeldt Name badge chairman

Larry Clark Technical advisor & librarian

Hal Layer Mailing labels

Russ Turner Our Secretary

Mike Simpson Membership chairman

Martin & Lynn Love Refreshment chairpersons

Stephan Ponck Board member

I could not do my job if it were not for the efforts of these people. I wish to express my sincere thanks and gratitude to them for helping to make CHRS the best organization in the country. Thank you!!!!

INFORMATION:

Collector Events

Here is the list of events for 1998. All events are subject to change or rainout. Please call the CHRS HOTLINE: 415 821-9800, for the best updated information. Please note the events that are "Tentative" or "To Be Announced."

February 7th. Saturday, 8am
Los Altos Hills, Foothill College,
Lot "D". Take El Monte Rd. west off I-280.
Make a right turn into the campus. At the Outer
Campus Circle, you must now turn RIGHT,
instead of left. Go up the hill and look for LOT
"D", (formerly Lot "T"), and turn right into the
lot. AUCTION. Sellers fee applies.

March 7th. Saturday, 9AM
Sacramento, the Towe Ford Museum,
on Front St. near Capitol Ave. Near Old Town.
Sellers fee applies. See a fine collection of
vintage autos in a great museum setting.
Thanks to Bill Howell for arranging this event.

April 4th. Saturday, 8am
Concord, Concord Flea Market at the Solano
Drive-in. Sellers fee applies. Thanks to Stan
Lopes for setting up this event.

May 2nd. Saturday, 8am
Los Altos Hills, Foothill College, Lot "D".
AUCTION. Sellers fee applies.

June 6th. Saturday, 8am
San Rafael, Erik's Downtown Drive-In,
corner of 2nd. and Lindero. Sellers fee applies.
Thanks to Lee Alder and remember... Erik
cooks a great breakfast!
Date is Tentative.

July 4th. Saturday, 8am
San Francisco, St. Annes of the Sunset,
850 Judah St. off Funston (13th. ave.).
AUCTION. Sellers fee applies. Thanks to
John Wentzel of Aladdin Radio for making
the arrangements.

August 2nd. Saturday, 8am
Los Altos Hills, Foothill College, Lot
"D". AUCTION. Sellers fee applies.

September 5th. Saturday, 8am- Joint meet
with SCARS in San Luis Obispo.
Date is tentative. Location to be announced.
Thanks to Dan Steele.

October 3rd. Saturday, 9AM
Western Railway Museum, between Fairfield
and Rio Vista, State Rt.12. Collectors event
and Picnic. No sellers fee, pay reduced
museum admission. Thanks to Paul Bourbin
for setting up this one.

November 7th. Saturday, 8am
Los Altos Hills, Foothill College,
Lot "D". AUCTION. Sellers fee applies.

December- (nothing yet)
Happy Holidays from CHRS

Sacramento Chapter Meetings- Are held the
3rd Tuesday of every month. 7pm at the
SMUD building, corner of Elkhorn and Don
Julio, In Sacramento. All members are invited
to attend!

Please feel free to call me with any
thoughts and suggestions you may have for the
Club. This organization is kept fresh and
interesting by new ideas that come from the
members. Your comments are most appreciat-
ed. Call me at 415-821-7671 or leave a
message on the HOTLINE at 415-821-9800.

I would like to wish all the members and
their families, the Happiest of Holidays and a
Prosperous and Healthy New Year!

HAPPY COLLECTING!
Steve

LYNCH

WARRANTED FIXED RESISTORS

HEAVY-DUTY TYPE

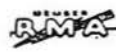
The new Lynch wire-wound heavy
duty resistors for eliminator and
power work are now ready. These
units are ideal for use in Raytheon
and all other power circuits.

EQUALIZORS

For perfect filament control use the Lynch
Equalizers. There is a type for every type
of tube and for any combination of tubes.
A Lynch Equalizer will take the place of
your filament rheostats. Complete, with
mounting, \$1.00.

Lynch Suppressors and Low-loss
mountings mean better radio.

At All Good Dealers

ARTHUR H. LYNCH, INC.,  Gen. Motors Bldg.
B'way & 58th St.
New York, N. Y.

"B" BATTERY ELIMINATOR

Only \$4.75

MONEY-BACK GUARANTEE
No more worry with "B" Batteries! Hook up a
Perfect "B" Battery Eliminator and forget bat-
tery troubles forever. This wonderful new inven-
tion means better reception, sharper tuning.
Gives you more real pleasure from your set.
Completely Equipped—No "Extras" to Buy
Operates perfectly on direct or alternating cur-
rent, giving up to 90 volts current, and using the
full wave of the power supply. Simple directions
enclosed—anyone can plug it in to any kind of
set up to six tubes. Constant voltage
gives set more power. Costs no more
than set of good "B" Batteries.
SEND YOUR ORDER NOW
Don't blame your set because run
down "B" Batteries won't let it work
right. Order your Eliminator NOW. Write
name and address on a piece of paper, pin a
dollar bill to it, and mail it TODAY. Pay post-
man balance (\$3.75 plus a few cents postage)
when he delivers your Eliminator. Use it ten
days. If not more than satisfied, return it and
get your money back.
PERFECT ELIMINATOR CO.
114 National Theatre Bldg., Cincinnati, Ohio

Make Any Good Receiver

BETTER
CEC C. E.
TUBES Mfg. Co., Inc.
Providence,
R. I.



In Memoriam

George Edwards Hoffman
Jan. 11, 1928—July 11, 1997

WANT ADS

Wanted- Televisions, Philco Predictas all models. All types of earlier TVs wanted. Send fax or description to Sheldon Donig, 340 Laurel Ave. San Anselmo, CA 94960 415-454-8851 Fax 415-456-9322.

Wanted- Riders manuals, Volumes 17 thru 23. Call CHRS HOTLINE - 415-821-9800.

For Sale- CHRS Tee shirts, \$17, including postage. CHRS baseball caps \$10, including postage. Call CHRS HOTLINE 415 821-9800.

Wanted- Blue, etched, side mirror for Sparton 558 (4 knob). Chassis for Stewart Warner R469. Abbottwares "Hula Girl" Radio. Steve Kushman, 4233-25th. St. San Francisco, CA 94114 415-821-7671

Wanted-1945-1953 Plywood radios from the following companies: Emerson model #503, #519, #535 or any with the perforated fronts. Tele-Tone #117, 117A with speaker holes. RCA model #28T. State price based on condition. Also want Zenith "radio nurse", brown plastic speakers. Steven Cabella, 500 Red Hill Ave., San Anselmo, CA 94960. Phone 415-461-6810.

Wanted- Mini-tube and hybrid coat pocket size plastic radios, pocket crystal radios, hearing aids. I'll buy, or trade my transistor radios. Mike Brooks, 7335 Skyline, Oakland, CA 94611. Phone 510-339-1751.

For Sale- Send large SASE for tubes, parts, literature, radios or for books, magazines, catalogs, manuals. Two stamps, please, brings you both lists. Stan Lopes, 1201-74 Monument Blvd., Concord, CA 94520. 510-825-6865.

Wanted- Rack mount Navy radio RBC or RBB, or the cabinet alone. John Gibson, 1075 Sterling Ave., Berkeley, CA 94708. Phone 510-849-1051.

Free- Homemade LF/MF loop antenna. Range approx. 180-900Khz. Range can be altered. Size: 40"x 60". You pick up. P.F. Warnke. Vallejo. 707-643-6202.

Wanted- White dial indicator for Zenith 5-S128. Cube cabinet for Philco 40-180. For Sale or Trade- my novelty and replica radios. SASE for list. Zenith 3000-1 manual, complete, good condition \$8. Ben Martin, 18334 Pepper St., Castro Valley, CA 94546. 510-582-6804.

Wanted- Back cover, chassis shielding or power cord plug for Edison C-2 radio phono. Fred Deal, 916-478-4842.

Wanted- Tuning mechanism for Atwater Kent 318. Jim Regan, 415-664-7814.

Wanted- People interested in forming a group to buy capacitors in bulk and save money. Martin Love, 415-341-6526.

Wanted- Wave Magnet for a Zenith T.O. model # & 7G605 (bomber). 1L6 tube. Chris Rogers, 38 Smethurst Ave., Pakenham 3810, Victoria, Australia.

Wanted- Western Electric 2A (power supply), 7A (amplifier), 10D horn speaker and tubes: 216A, 217A, 104D, 205D, 350B. Ming Yang, 510-376-4220. fax 510-376-8861.

Wanted- chassis for Gloritone 27. Joe Selkregg, 408-980-0474.

For Sale- Old radios, \$50 to \$150. 1930's to 1950's. Restored and working! Jim McDowell 510-798-4333.

Wanted- Ampex MR-70, universal audio compressors, mic pre-amps, EQs, other tube broadcast and studio items. Leave message. Mark Drury 510-426-2300.

For Sale- Edison Model C-2, radio phono, unrestored, original. \$1000 or best offer.

Wanted- assembly and operating instructions for a Globe "Chief" ham transmitter. "Zep" Bennett. 510-534-9576.

Wanted- Top \$\$\$ paid for art deco style sets with chrome or metal grills/trim 11930-1940 only. Also buying radio & other advertising signs, clocks, banners. Adam Schoolsky. 503-579-1080.

Wanted- RCA CED Videodisk players and movies. Art Adams 415-321-4886.

For Sale- Misc. parts, hi-voltage caps, DCC wire, etc. Send SASE for list. Dan Smith. 8904 Cypress, Cotati, CA. 94931. 707-664-8156.

For Sale- Thousands of tubes, various tube sockets, (e.g., Amphenol octal ceramic) and shields. Assorted hardware and components, (wire, resistors, insulators, grid/plate caps, etc.) Don Buchalter 510-569-3619.

Wanted- Any information about radio operations at the Presidio, 1901-1991. Please call Bart Lee, 415- 788-4072(eves), 415-956-5959 #!03(days).

Wanted- Knobs for 10" Admiral plastic floor model TV. and fine tuning knob for 7" Motorola TV. also, Service- I repair auto radios. Roy Yost, 415-369-0890.

Wanted- Large Midwest table model w/ half round dial (1941) and other Midwest radios and parts, what have you? For Sale- lots of tubes and knobs, (send want list or call). also Victor wind-up/ Freed-Eisman radio phono combo, very rare and unique, \$450/offer. Mike Simpson. 408-867-7315.

For Sale- Columbia HG phonograph. Plays concert cylinders. Trade- Dyna Mark II plus cash for Dyna Mark III. Allan Hibsich, 916-589-0138.

Services Offered-Repair/replacement of meters before 1940. Wanted- Old meters/ Galvos before 1910. As is okay. Thanks, Leonard Cartwright, 879 Russet Dr., Sunnyvale, CA 94087. Phone 408-739-6025.

For Sale- Hallicrafters SX-43 restored-\$175- (no speaker). You pay UPS, local pick-up preferred. Ted Stewart. 2157 Braemar Rd., Oakland, CA 94602. Phone 510-531-7042.

For Sale- Bird Wattmeter with case and six slugs: 2-30 Mhz 100w, 500w, 1000w- 100-250Mhz 25w, 250w- 200-500 Mhz 25w. Excellent condition, Model 43, 50 ohm. Dave Schutt, 22 So. Keeble St., San Jose, CA 95126. Phone 408-293-3437.

For Sale- Kenwood TH21-A, 2 meter hand held transceiver, new ni-cads, short and long rubber duck, charger and 115VAC supply. Original packing and manual- \$60. Henry Meyer, 30 Tobin Clark Dr., Hillsborough, CA 94010. Phone 415-349-2071.

Wanted- UV-199 socket to make adapter to test tube at a 80 socket or an adapter. Edsel Erwin, 1513 E. Houston Ave., Fresno, CA 93720-2750. Phone 209-299-5012.

Wanted- Atwater Kent model 20, big box radios, any condition. please state price. Paul Thompson, 315 Larkspur Dr., Santa Maria, CA 93455. Phone 805-934-2778.

Wanted- Any information on the history, use, or development of the HT-4 transmitter by Hallicrafters. Mikhael Brown, 188 Spruce-mont Place, San Jose. 408-578-6076.

Wanted- Small knob (one) for W. E. Aeriola Sr., either filament or tickler. Gene Warner, 522 Weiman, Ridgecrest CA 93555. Phone 619-446-2617.

Wanted- Antenna for Radiola Super VIII console, or details to construct one... pictures, dimensions, etc. Mark S. Rauber, P.O. Box 1077, Minden NV 89403. 702-782-3596.

Wanted- Vintage and collectable TVs and related items, other than parts or service literature. Eric Stumpf, P.O. Box 60245, Santa Barbara CA 93160. Phone 805-964-9417.

Wanted- Good photos of tube type transmitters, transceivers, and allied equipment, for the next edition of 'Tube Type Transmitter Guide'. Gene Rippen, 105 Donnington, Auburn, CA 95603. Phone 916-885-6147.

Wanted- Pocket size reel to reel tape or wire recorders. Guy Doss, 736 Los Padres Blvd. Santa Clara, CA 95050. Phone 408-241-2437.

Wanted: Looking for help in repairing my Seeburg Model DS160 Juke Box. It rejects the selected 45 before it plays. Contact Norman at 1(510) 682-4592.

August 13, 1997

To the California Historical
Radio Society,

One grateful thanks to all of your members who made a difficult time so much bearable. When our Steve passed away, we were now what "need" by the task of finding "homes" for the pieces of his beloved collection of radios. When Steve Hudson suggested the auction, it seemed to be the perfect answer. Thanks to all of his hard work we are comfortable with the solution. We were very glad that CHRS was able to benefit from the proceeds. What a great group of people.

One very best to all of you. Thank you.

Very sincerely,

Barbara and Bob Coleman

Lord Haw Haw

Norman Cox



William Joyce at the outbreak of the war

September 11, 1939. In the early evening millions of listeners in Great Britain are turning on their radios and tuning in to Radio Germany where they often pick up important war bulletins that will not be heard on the BBC Home News until 9:00 that evening. Tonight they hear a new voice from Joseph Goebbels' stable of propagandists. There is not much special to bring him to anyone's attention. His newscasts are at first mostly unremarkable.

Soon he develops an audience by rehashing old grievances between labor and the country's leaders. As the war runs more in the favor of the Nazis his voice becomes more confident. It is arrogant and sarcastic and he delivers his news in a penetrating baritone. He now has adopted a pseudo Mayfair accent and he offers short skits, off color music hall style jokes and commentaries against the English gentry. His opening words "Germany Calling" and "To some I may seem to be a traitor but hear me out." become his trade marks.

Night after night he is heard and during the long hours of the blitz, the British, huddled in their bomb shelters, come to hate his voice as no other voice has been hated in history. "Scurry into your cellars like rats you snobs of Kensington. The glorious Luftwaffe is on its way to blow you to bits." Because of his fumbling attempts at humor and his imitation accent *The Daily Express* starts calling him Lord Haw Haw. The nickname sticks. His opening "Germany Calling" is repeated phonetically in the press as "Jairmany Calling". BBC comics attack him in rhyme; he is impersonated at Mayfair events and he becomes a scornful character in a musical revue. He becomes a popular listening habit and it is estimated, now, at the peak of his popularity, that over half of the 9,000,000 licensed British radios are tuned in to him nightly.

Trying to figure out who he is becomes a national pastime. Some say he is: 1) a German professor who once taught in Scotland, 2) an ex Highlander, Norman Baillie-Stewart, who had been jailed in London for betraying military secrets or 3) Henry William Wicks, a onetime London insurance man now living in Germany with his Nazi-minded wife.

The British, who always want to place people in their proper social level by identifying their accent, have many learned discussions in the press trying to nail down his background which is variously described as aristo-

cratic, public school or phony.

In March 1940 the riddle is solved. He is not British. He is an American. A woman in the village of Waldron, Sussex, interviewed by *The Sunday Pictorial*, says that she is sure Lord Haw Haw is her ex-husband, William Joyce. The British *Catholic Herald* states flatly that "Lord Haw Haw is William Joyce". British officials, after their own investigations, confirm to the press that they have their man: William Joyce. On April 2, 1941 he identifies himself in a broadcast monitored by CBS's short wave listening station.

Joyce was born 1906 in New York of Irish parents and grew up in Ireland and the London slums. He went to London University as a language student, tutored for awhile and then in 1933 joined Sir Oswald Mosley's British Fascist party. Street brawls between different political factions were not unusual at the time and during an argument with a group of Communists Joyce had his right cheek cut from mouth to ear with a razor. He became one of Sir Oswald's leaders. Wearing his scar as a badge of dedication, he regularly took his turn on the Fascist speaker's stepladder at the Marble Arch corner of Hyde Park. Soon he developed what he thought was a "cultured" speaking accent from hanging around the University of London. In 1937, when he was kicked out of Mosley's group, he formed Britain's National Socialist League.

Just before World War II started, Joyce abandoned England and headed for Germany because he did not want to fight against the Fuehrer and National Socialism. In September





1939 he signed on with the Nazis as an editor and announcer of English language news and propaganda. With all of the new found publicity in the British press he soon became one Goebbels' favorites. Adolf Hitler thought so much of his efforts that he awarded him the Crown of War Merit medal, First Class.

When the war started turning against Germany the English tuned in to the hated Lord Haw Haw not for news, but for laughs. Now his arrogant voice would describe retreats of the previously invincible Wehrmacht as "disengaging movements". During the blackouts Cockney office boys could be heard competing

with each other by yelling out into the night their impersonations of his trademark "Jairmany Calling".

When British planes were on their way to bomb Germany the Hamburg radio station would shut down so that its signal could not be used as a homing beacon. The BBC gleefully giped: "He shouts with rage and screams with fear but pipes down when our planes are near."

Inside Germany the government was having trouble with its own radio listeners. On January 24, 1941 the Nazi controlled radio reported that six Germans had been sentenced from 4 to 7 years for listening to foreign broadcasts.

On May 18, 1941 the New York Times noted that the German press reported: "A traitor, Johann Wild, 49, was executed for regularly listening to foreign newscasts." These strict actions, hard to understand today, were in response to the real and feared power of radio to mold public opinion.

As the war wound down so did the once mighty Nazi radio propaganda machine. Berlin's signal became weaker and weaker. Now broadcasting in shorter and shorter spasms it finally shut down without a sign off. Next Bremen faded away. Hamburg was now the sole source of the German High Command's daily communiqués.

In Hamburg, on April 30, 1945, a week before Germany surrendered, Joyce made his last broadcast. Sounding drunk, in a stuttering and choking voice he admitted that Germany might be beaten. When Hamburg radio announced the fall of the city, *Deutschland uber Alles* filled the air. Wilhelmshaven tried to carry on but finally, blaming poor atmospheric conditions, it too shut down. Berliners, who still had working radios, heard their own Wagnerian *Götterdämmerung* funeral played out just for them from somewhere inside Germany. "Vapors and smoke trail upward.... Underneath is a sea of flame, a volcano of millions of fires and twitching shadows." When Berlin was next heard it was speaking Russian. Hamburg found its voice again but it was broadcasting a General Eisenhower speech in English. "The Allied forces serving under my command have now entered Germany. We come as conquerors."

Dr. Goebbels had realized that Joyce would be harshly treated if he fell into the hands of his former countrymen and he issued special orders that he was to be given all means of assistance to help him escape. He fled Hamburg with a new identity and various travel documents. He settled anonymously in the town of Flensburg. In the chaotic times of occupation he was unceremoniously kicked out of his hotel room by the British who needed it for their own use.

Now on his own he started walking toward the Danish frontier carrying a German passport made out in the name of Hansen. On the main highway to Denmark he stopped to talk to two British officers gathering firewood. Probably to avoid suspicion he casually spoke to them first in German, then in French without

response. Then in what had to be the dumbest move on his part, he spoke to them in English. "I used to gather firewood myself." As any Englishman would, they recognized his voice immediately. When they pressed him he admitted that yes he was Lord Haw Haw. He had his hand in his pocket and according to the officers while he was talking he moved his hand in a threatening manner and one of the soldiers shot him in the thigh. He was quickly taken to Brixton Prison in England where he was to be cared for until he could be tried for treason.

The trial, which was to become the peoples version of the Nuremberg trials, took place in the historic Old Bailey and lasted only three days. Joyce's defense was based mainly on the fact that he was born in the United States and that in 1940 he became a naturalized German citizen. The prosecution argued that at the time Joyce was issued a British passport in 1939 he declared that he was a British subject and was therefore now subject to its laws. The court agreed.

It was ruled that he gave help to the King's enemies by broadcasting propaganda while still owing allegiance to the British Crown. The jury returned a verdict of guilty and the first person to be described as a radio traitor was sentenced to death for treason.

His appeals and a request to the United States to declare him as a US citizen were denied. On January 3, 1946, seven months after his capture, William Joyce was hanged at Wandsworth Prison in South London. Defiant and unrepentant to the end he issued a statement through his brother warning the British people against "the crushing Imperialism of the Soviet Union".

It is ironic that on the same day his execution was being reported in The New York Times that an adjacent column in the newspaper was noting that high English government officials were meeting together to come up with some legal means to curb the resurgence of Sir Oswald Mosley's fascist movement. This was the same group that William Joyce served so vocally in Hyde Park before the war.

References:

Time, March 11, 1940, May 14, 1945

Newsweek, June 11, 1945

The New York Times, June 19, 26, 1945

September 18, 19, 20, 1945, Jan 4, 1946

Program for the Week of April 13 to April 19, 1941

EVERY DAY

6:00 A. M. — 4:50 P.M.		D J Z — 25 m	
EST A.M.	PST A.M.		
5:00	3:00	3:30	12:30
6:30	3:30	3:45	12:45
6:45	3:45	4:00	1:00
D J B — 19 m		News in English	
Call. Early Bird Concert		News in French	
News in English		SILENT	
"Action Reports from the Front"		D Z D — 28 m	
(Monday, Wednesday, Friday)		4:30 1:30	
Rieder Talk —		News in English	
(Tuesday, Thursday, Saturday)		11:05 P.M. — 1:00 A.M.	
7:00	4:00	D X P — 49 m	
8:00	5:00	Late Music	
8:15	5:15	News in English	
8:30	5:30	Late Music Continued	
8:45	5:45	SILENT	
11:30	8:30	News in English	
11:45	8:45	SILENT	
P.M.		Midnight	
12:30	9:30	News in English	
12:45	9:45	SILENT	
1:30	10:30	News in English	
		A.M.	
		12:15 9:15	
		1:00 10:30	
		Concert of Light Music by a Regional Broadcasting Orchestra	
		Sign Off until 6:00 A.M. (3:00 A.M. PST)	

Sunday, April 13

D J D — 25 m: 31 m: D X P — 49 m		EST P.M.		PST P.M.	
4:50	1:50	8:00	5:00	8:15	5:15
4:55	1:55	News in German			
5:00	2:00	"America Asks — Germany Answers"			
5:30	2:30	(Answers to Questions from American Listeners)			
5:45	2:45	8:45	5:45	9:00	6:00
6:00	3:00	"Dear Harry" Fred Kallenbach			
6:15	3:15	"O K SPEAKING"			
7:00	4:00	Economic Review			
7:15	4:15	E. D. WARD			
7:30	4:30	Notions Club			
		Music			
		News in German			
		News in English			
		"Listen and Judge for Yourself"			

D J D — 25 m: D Z D — 28 m: 31 m: D X P — 49 m

EST P.M.	PST P.M.	
8:00	5:00	News in German
8:15	5:15	"America Asks — Germany Answers"
		(Answers to Questions from American Listeners)
9:30	6:30	"LORD HAW-HAW"
9:45	6:45	Sunday Evening Program
10:00	7:00	Rear-Admiral Luttwak
10:15	7:15	Economic Review
10:30	7:30	"Action Reports from the Front"
10:45	7:45	"Anchors Aweigh"
		"Easier Bells are Ringing"
		News in German
		News in English
		Talk in English

Monday, April 14

D J D — 25 m: 31 m: D X P — 49 m	
4:50	1:50
4:55	1:55
5:00	2:00
5:45	2:45
6:00	3:00
6:15	3:15
7:15	4:15
7:30	4:30

U.S.A. Zone offerings

Tuesday, April 15

D J D — 25 m: 31 m: D X P — 49 m	
4:50	1:50
4:55	1:55
5:00	2:00
5:30	2:30
5:45	2:45
6:00	3:00
6:15	3:15
7:15	4:15
7:30	4:30

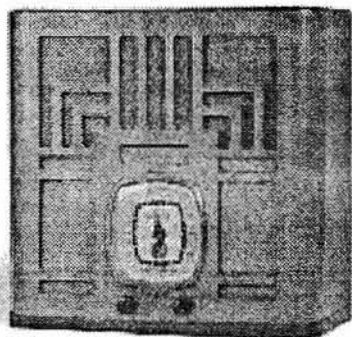
D J D — 25 m: D Z D — 28 m: 31 m: D X P — 49 m

EST P.M.	PST P.M.	
8:00	5:00	News in German
8:15	5:15	"America Asks — Germany Answers"
		(Answers to Questions from American Listeners)
8:30	5:30	"LORD HAW-HAW"
8:45	5:45	Variety Entertainment
9:00	6:00	"O K SPEAKING"
9:15	6:15	Economic Review
9:30	6:30	"Action Reports from the Front"
9:45	6:45	Scenes from "Aimee"
10:00	7:00	News in German
10:15	7:15	News in English
10:30	7:30	Fred W. Kallenbach, German Contributions to Making America
10:45	7:45	

Lone Ranger "Test Recording"

Arthur F. Adams

...and a
FARTY
Hi-Ho Silver...



While going to college in Chicago in the late 1940's I worked for a surplus electronic store (Junk dealer) in order to make money to augment my G. I. bill. Working in the surplus business at this time is another story in itself. During this time I met many fascinating people, the source of the following story being one of them. His name escapes me, all I remember is that he was a former recording engineer for radio station WXYZ Detroit. The word "former" stands out for reasons that will be come to light as the story unfolds.

While at WXYZ, George (a name for reference only) was a recording engineer for the Lone Ranger radio show. At this time the Lone Ranger was aired three times a week, first over stations in Chicago and New York as well as Detroit and then on others throughout the country. Typically a show would be written and recorded some six weeks in advance of its scheduled broadcast date to give time for review and distribution to network stations. At this time there were no satellite or microwave links. Telephone lines provided reasonable fidelity for sending radio programs to network stations. For serial programs like the Lone Ranger it was important that programs be broadcast at the same local time in the different U. S. time zones. In order to have simultaneous broadcast of programs, shows were recorded on 16" transcription disks which were then sent to the network for broadcast on a specific date and time.

In the case of the Lone Ranger, as with many other radio programs at this time, the show had only one sponsor, not like the multitude of sponsors seen on today's TV programs. As part of the Network contract, a review copy of each program was sent some five weeks in advance of the air date to the sponsor for review and comment. If there were no problems the broadcast discs were sent from WXYZ to the network some two weeks in advance of scheduled air time.

After one particular recording session the announcer mentioned that no comments had ever been received back from the sponsor. It appeared that the review disks were probably being filed away by a mail room clerk or thrown in the trash and that no one ever actually reviewed them. To see if this was the case George suggested that they produce a "test" recording. The Lone Ranger (Buck Brannaman) and the announcer went along with the idea. As many will remember the program started out

with a portion of the Overture to Willam Tell by Rossini followed by the announcers introduction, "With a fiery horse with the speed of light, a cloud of dust and a hearty Hi-Yo Silver The Lone Ranger!" On this date on the disk sent to the sponsor the announcer opened the program with, "With a fiery horse with the speed of light, a cloud of dust and a FARTY (full emphasis upon FARTY) Hi-Yo Silver, The Lone Ranger!"

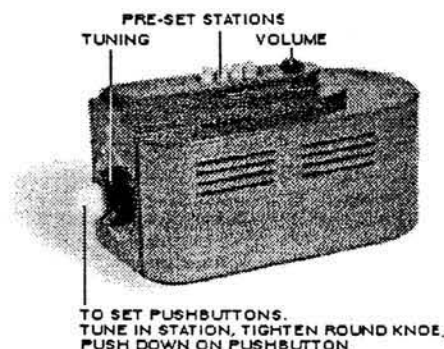
This disc was duly sent on to the sponsor and some four weeks went by without comment. The suspicions of the trio appear to have been confirmed until a panic telephone call was received at WXYZ about a week before this program was to air. It was the sponsor!

What the trio was not aware of was that one of the senior vice presidents of Ralston Purina (the sponsor) was an avid Lone Ranger fan. Upon his direction to the mail room, all Lone Ranger recordings were to sent to his office as soon as they were received. This way he could upstage his friends by knowing in advance what was going to happen on future Lone Ranger shows. As luck would have it, he was on a month long marketing trip when this particular recording reached his office. Upon returning, he gradually caught up on the Lone Ranger's adventures. When he listened to the "test" record he nearly had a stroke! At first he couldn't believe what he heard. He had several others listen and confirm his fears. At this time broadcasters were very careful about what was aired since bad language could reflect upon the sponsor products. For example it wasn't until the 1960's that a person could even say "damn" over the radio. He could see the futures of Ralston Purina suddenly going down the tube! When he realized that this show was to air in about one week's time and hit the panic switch and phoned WXYZ!

Of course when the record file clerk at WXYZ pulled the master copy it was as pure as the driven snow. It didn't take long, however, to piece together what had happened. The sponsor insisted that someone had to be fired. They couldn't very well fire the Lone Ranger or the announcer since they were too well known, so they zeroed in on poor George, the recording engineer. In this manner he became a "former" recording engineer of WXYZ. George went on to other recording jobs during his career but said that none was as enjoyable as working on the Lone Ranger. It is not clear what happened to the infamous "test" record.

Kadette Tunemaster

Alan Voorhees



THE AD COPY:

AMAZING...STARTLING
WIRELESS CONTROL FOR ANY RADIO
WITH KADETTER *TUNEMASTER*
Modernizes Customers' Present Radios...
Makes New Ones Better Still

Retails for \$25 complete
Over 20,000,000 Prospects!

To visualize the tremendous sales possibilities of Kadette *Tunemaster*, just imagine yourself lounging at ease the whole evening through, really enjoying radio as you have never enjoyed it before. Never once is the spell broken by having to leave your chair to change programs or adjust volume. Think, too, how convenient for the busy housewife. She can carry *Tunemaster* from room to room and operate a radio anywhere else in the home as easily as if sitting beside it.

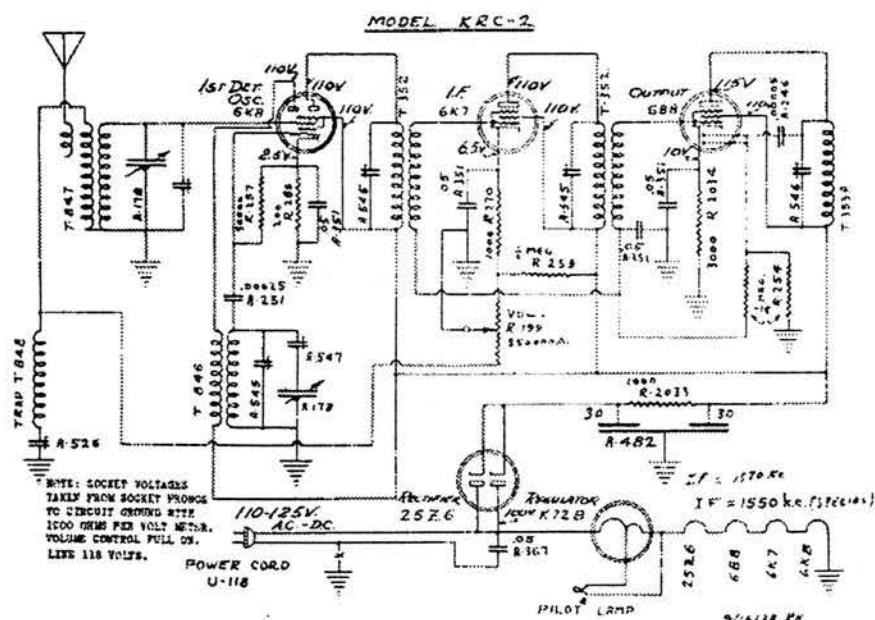
But this is only the beginning of the alluring sales-compelling picture. *Tunemaster* actually improves reception—sharpens tuning—increases sensitivity—gets distant stations with greater volume. In addition, it provides push-button tuning for four stations, remote volume control and true wireless tuning—not for just a few stations—but for

every station on the broadcast band from 540 to 1500 Kilocycles! Yet, the radio can still be used as before. Nothing is added to it—nothing taken away. Merely plugging *Tunemaster* into any electric outlet (AC or DC) is the only installation!

You don't merely tell this exciting story—you PROVE it! *Tunemaster* itself backs up every word. There's something you can REALLY sell, and virtually every radio owner is an immediate prospect. You will find, too, that a surprisingly high percentage who come to buy *Tunemaster* will easily be persuaded to replace antiquated radios with new ones, and those who come to buy a new radio will be just as easily persuaded to add *Tunemaster*.

What's more, there will be no lack of opportunities for such sales. Powerful national advertising that starts with a full page in the November 5 [1939] issue of *SATURDAY EVENING POST* will soon have millions looking for *Tunemaster*. Someone in your community is going to grab this unparalleled opportunity, and it might as well be YOU.

MODEL KRC-2, *Tunemaster*
INTERNATIONAL INDUSTRIES, INC. MODEL 845
Schematics



How It Works:

Just one of several approaches to remote controlled radios. The Philco "Mystery Control" that sent pulses to a special circuit in the radio that decoded them into volume adjustments or station changes and Motorola's "Time Tuning" were among other approaches. Unlike those, the Kadette *Tunemaster* is simple in design. It utilizes the principle of the Superheterodyne radio circuit. After the set tunes in a desired station, it converts it to an I.F. frequency of 1570kc (A 1550kc I.F. was also manufactured for areas with a broadcast station at that frequency). At this point, rather than extracting the program signal, the I.F. frequency was simply used as a broadcast signal capable of being tuned by any standard radio.

This meant, of course, that your radio had to be tuned to 1570kc and the volume had to be at a sufficient level to allow the *Tunemaster* controls to function adequately.

The scheme was successful for a number of reasons. Radios could tune to 1600kc (or even 1700kc, the "expanded" AM band where police calls were often located). Broadcast stations were, for the most part, confined to the lower portion of the band, with stations above 1500kc just starting to appear, and even in areas with the newer stations, there would not have been stations assigned to both 1550kc and 1570kc.

The *Tunemaster* sold for \$25, about a weeks pay for the average worker, and would have been a rather expensive item. The company was selling "10-tube" radios at the time for \$19.95. The set was designed in the fall of 1938 for sale in 1939, and in 1939 International Radio sold the Kadette radio business. The new Kadette company lasted only a couple of years, so the number of these sets manufactured may have been rather low.

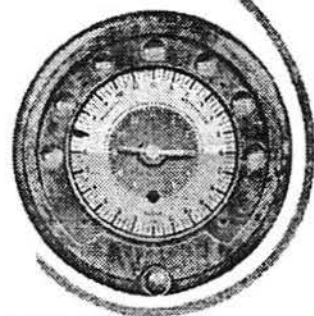
THE RADIO THAT ACTUALLY TUNES ITSELF!

*This Season's
Greatest Selling Feature*

Motorola WITH TIME-TUNING



Dealers all over the country are wild over it! TIME-TUNING tunes itself to all programs all day long! Now you can "pre-select", hours in advance, as many different programs as you wish, and then go away and forget your radio entirely. TIME-TUNING will remember for you. It automatically changes station after station without anyone even going near the radio. The last word in radio convenience!



The Motorola TIME-TUNING Dial is easier to use than a telephone. With it you "preset" all the favorite programs you want at one time, and the synchronous self-starting, self-regulating electric clock changes each station, all day long without any attention whatever.

GALVIN MFG. CORPORATION • CHICAGO

A Remote Radio Control Without Wires

Radio News, February 1928

An Explanation of a Proposed Scheme for Tuning a Stationary Receiver from Anywhere in the House.



The loops in the station selector (on the small table) are concealed within box; the left-hand cabinet on the table contains the band amplifiers; and the fixed-frequency receiver is on the right.

Believe it or not, the average radio listener is a lazy mortal. This may seem to many to be rather a harsh statement, but it is true nevertheless; else why should we find described daily new devices to eliminate some of the heroic labors that the listener must perform in order to operate his set? We now have trickle chargers that can be left connected to the storage battery, so that the owner will not have to carry the battery down to the cellar to charge it, or exert himself unnecessarily by lifting the telephone receiver from the hook and asking a service man to come around and get the battery.

The latest labor-saving device to appear is one that has great possibilities. No longer will it be necessary for Father to leave his comfortable arm-chair to tune in on a different station, because Mother doesn't like the color of the announcer's necktie at Station WXYZ; no, "them days is gone forever," if you have one of these "remote controls." All that need be done is to turn a knob on the front of a little box, which stands on your chair arm, and tune in the station that Mother wants to hear. No need to get out of that very comfortable position with your feet on the mantle-shelf to adjust the volume to its proper intensity; merely turn another knob on the same small box and the deed is done. Simplicity itself, isn't it?

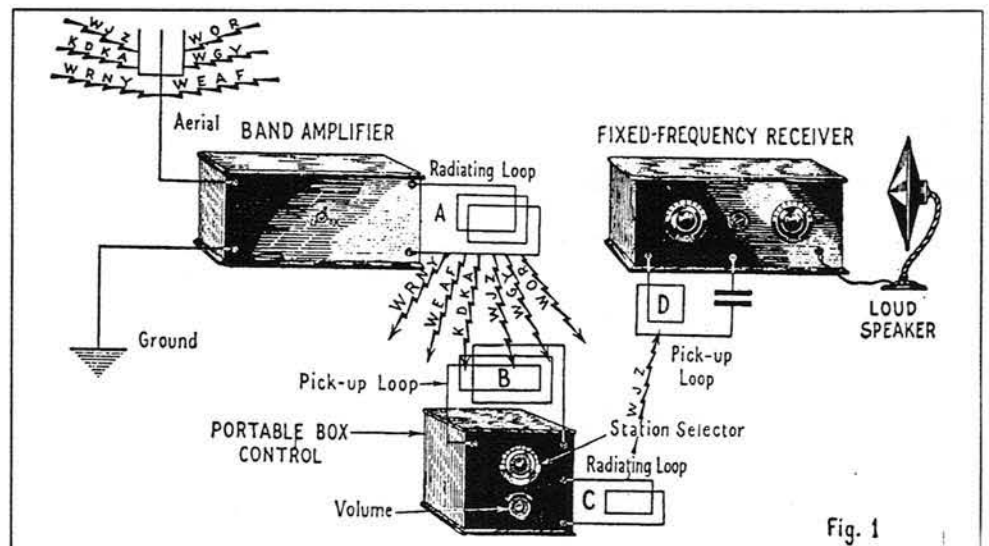
A feature that will make its appeal to the female members of the family is that the only apparatus which need be in sight is the small control box and the loud speaker. No longer will these words be necessary in the family bosom of the experimenter: "When are you

going to get a decent cabinet for that radio? I'm ashamed to have that old piece of junk sitting there on the living room table." (No matter how splendidly the set may work, it is always known as "junk" to the females of the family.) For with the remote-control system that does not utilize any wires from the control apparatus to the set (which is the case in the method, invented by Bowden Washington and Wilson Aull, Jr., of New York City) the band amplifier and the fixed-frequency receiver may be stowed in a closet with all the batteries, chargers and what not.

Theory and Operation

The question now arises, how is this done? To tell the truth, the process is simplicity itself. Refer to Fig. 1, in which will be found diagrammed a band amplifier, a portable control box and a fixed-frequency receiver, together with four loop antennas marked A, B, C and D. On the control box are indicated two controls; a station selector and a volume adjustment. The band amplifier, to which is connected the regular ariel and ground, is a radio frequency amplifier which builds up the signals of the waveband from 200 to 550 meters. It may use fixed R.F. transformers with overlapping tuning curves. The output of the amplifier is connected to a loop antenna, which, as shown in Fig. 1, radiates all the signals picked up by the outside aerial.

The radiations from loop A are picked up by loop B, on the input side of the portable control box. Across this loop is connected a



Signals from all stations within the receiver's range are amplified in the band amplifier, and the one to which it is desired to listen to is tuned in by the station selector and transmitted on a new wavelegnth to the fixed-frequency receiver.

Fig. 1

simple regenerative detector, the output of which modulates an oscillatory circuit, operating on a frequency that is either above or below the broadcast waveband. Let us assume this frequency is about 540 kilocycles. Then from loop C we have a wave of 540 kc. frequency modulated by the detected signal from a certain station, let us say WJZ, which is selected by the regenerative detector. The modulated wave from loop C is picked up by loop D, across the input of the fixed-frequency receiver, this frequency being the same as that of the oscillating circuit in the control box, 540 kilocycles. Thus only the single frequency, 540 kc., will in any way affect the receiver, as it is tuned to that frequency alone.

Control Box is Simple

The small box that is placed on Father's chair arm is very simple of construction. It is entirely self-contained; i.e., the loop antennas, the necessary batteries for the two tubes, the apparatus for tuning and the oscillating circuit are all within the confines of the small box. In order to facilitate construction, tubes of the 299 type are employed so that dry-cell batteries may be used and, consequently, two of the small 22-1/2-volt "B" batteries can be stowed away in a convenient corner. It is designed for sufficient sensitivity with non-adjustable automatic regeneration, so that only two controls are necessary—the grid tuning condenser for selection and a volume control, which may be a potentiometer controlling the modulation of the oscillator.

This control box may be as decorative as may be desired and the two controls, appearing on the outside of the box, can be made to correspond to the scheme of the decoration, just as in some of the receivers appearing on the market at the present time.

The band amplifier and the receiving set can be made to operate from the same batteries or socket-power devices, which can be hidden in a closet along with the rest of the apparatus, except the portable control and the loud speaker. The latter can be arranged so that when it is plugged into a jack, it will turn on the filament current to the tubes, which will be cut off when the speaker plug is withdrawn. This may be easily done with a filament-control jack. Any number of these

jacks may be distributed about the house, wired in parallel; so that, no matter in what room it is desired to have music, the loud speaker and the control box are all that is necessary to carry there. There is little doubt that the radiations from the control box will be strong enough to operate the receiver from any point in an ordinary-sized house. If the area to be covered is greater than that of the average eight-room house, then more powerful tubes can be used in the control box which, of course, then would have to be enlarged to accommodate the different batteries.

The band amplifier should have at least three stages, so the entire waveband will be satisfactorily covered and amplified sufficiently. The transformer in the first stage can be made to cover the frequencies between 200 and 350 meters; that in the second, those between 325 and 450 meters, and the last stage, between 425 and 550. In this way, no matter where the signal lies in the broadcast band, it is amplified and retransmitted to the control box.

The single-frequency receiver, which we have assumed to be operating on 540 kilocycles, can be any standard broadcast receiver. Most of the sets that are being built at the present time tune slightly above and below the broadcast waveband. It is only necessary to tune the set once to the frequency at which the oscillator is working and allow the controls to rest in those positions. In reality, no matter how many controls the set has, they are reduced to one by employing the control box.

Warren Radio Loop,
Cut Away to Show
Construction.





A Better Set with a Better Aerial

Those who get the most out of their sets use a Warren Radio Loop. Eliminates interference; simplifies tuning. Wider range of frequencies on single coil. Fits inside cabinet or any small space. Many other advantages. Choice of experts. Buy a Warren Radio Loop for expert results.

Send for Bulletin T102, containing hook-ups

Sharper Tuning
One tuning adjustment — no others needed.

Directional
Receives signals strongest.

Selective
Picks out just the station you want to hear.

Portable
Small, light, compact. Ideal for portable and mobile sets.

Wider Range of Frequencies
on single coil. Small re-radiative effect. Fine for regenerative circuit.

A Type For Every Set

Type A-737 (300-700 meters) 6 inches square—non-directional	\$10.00
Type A-7236 (175-1000 meters) 6 inches square—non-directional	12.00
Type B-2537 (300-700 meters) 18 inches square—directional	20.00
Type BL-2520 (200-18,000 meters) with honeycomb coil mounting, 18 inches square—directional	25.00

V-DE-CO RADIO MFG. CO.
Dept. N ASBURY PARK, N. J.

RADIO BOOKS

Latest and Best. Catalog Free.
RAY DOBBINS
146 West 27th St. Indianapolis, Ind.

PERFECT CONNECTIONS



PRESS HERE are always sure with

Fahnestock Patent Wire Terminal

Grips Like a Vise

Eliminates Vibration

Easily Attached

No Soldering

Best of All for RADIO OUTFITS

Clip No. 45 (Illustrated) especially
Adapted for Bus Wire
Made in all Sizes and Shapes
At your Dealer's

FAHNESTOCK ELEC. CO.
East Ave. and 8th St.
Long Island City, N. Y.

Radio Servicing During WW II

A Personal Experience.

Arthur F. Adams

When the United States entered the war in 1941, radio had already begun to play a major role in American life. The 1930's brought rapid development of radio technology bringing home radios to the status of a household necessity. Radio broadcasting had also achieved a degree of sophistication with networks providing reasonably high quality programming. Rural communities were now brought into contact with the big cities. Nightly news broadcasts suddenly became the focal point of everyone's attention bringing the progress of the war into the home. Television broadcasting had actually begun on a limited basis in 1939 and by 1941, 23 stations were on the air throughout the country. They essentially ceased operation during the war since not enough receiving sets were in use to make it pay.

With this increased interest in radio, both for entertainment and news, came an increasing demand for radio sets. Early in 1942 domestic radio production ceased and radio companies either switched over to war production or went out of business. Many small radio companies simply closed up shop since they were nothing more than loft operations that were ill equipped to handle military work.

With home radio production stopped, attention was directed toward keeping existing sets in operation. By about 1940 nearly every block of medium and large sized cities contained a radio repair shop. Radios were not very reliable and as a result this was a good time to be a radio repairman.

I got my start quite by accident. When the Pearl Harbor attack took place I was a 15 year old Chicago high school junior. My interest in radio was triggered by my physics teacher who recognized that I had a technical leaning. I started with crystal radios and graduated to battery operated one and two tube broadcast and short wave sets. Since parts were relatively expensive I scrounged as many parts as I could from discarded sets. As the war went on, however, the supply of discarded sets dried up since people were having them repaired.

Late in my high school junior year I was getting tired of such after school jobs as grocery delivering and clerking so I decided to try my luck at radio repairing. My evaluation of my capabilities was somewhat inflated and after a few interviews it became painfully apparent that I was not adequately prepared for this work. I

did manage to land a job as a "gofer" for a radio shop in my neighborhood. The shop was located under the elevated train tracks in Chicago across the street from the Jarvis Avenue station. The shop owner, Sam, was an old time radio man with less than scrupulous business methods. I later discovered that he had been run out of several neighborhoods for poor business practices.

His shop was piled high with boxes of parts and old radio carcasses and he lived in a curtained off section in the rear of the shop. This was not only my first exposure to the business of radio repairing but also to business ethics "Chicago style." Since new parts were in short supply it was common practice to rewire sets for alternate parts especially vacuum tubes. Sam was quite good at selling rewiring jobs when they were not needed and charging customers for work not done. He was really quite good at troubleshooting and fascinated me with his method of checking voltages in small AC/DC table radios. He would upend a chassis on the bench and place his thumb on a terminal in the negative return circuit and then with his callused forefinger he would touch tube pins to check the presence of plate, screen and other high voltages. I tried it once and quickly discovered that without calluses this can be an exciting and painful experience. After this I used a volt meter.

After I had been working for him a few weeks and seeing how he bilked customers, I asked him how his conscious would let him do this. His reply was, "kid, when a man walks through the shop door with a radio under his arm he has only one thing on his mind. He knows that he is going to get taken. Even if you did the work for nothing he would still think that he is being taken. So, the only practical thing to do is to take him!" A few days later I quit and looked for other work.

I then managed to land a job in a store that did radio servicing and sold phonograph records. The owner took me on as an apprentice. My job was to sell records and help the serviceman owner repair sets. I developed a keen interest in the work and found that I could soon handle quite a bit of the shop work. He was a very honest business man and it was refreshing to work in this environment. It was here that I learned the radio repair trade that would eventually lead me into electrical and mechanical engi-

neering. So much for me, now let's talk about servicing during the war.

It wasn't until mid 1943 that part shortages really began to appear. Some hoarding took place but most of the repair shops were legitimate. About this same time radio repair shops began rummaging through radio carcasses in their basements which had been abandoned by customers a few years back because they were either too old style or too costly to repair. Household radio sets changed considerably during the period of 1930 to 1941. The old round tops and highboys consigned to the attic because they were old fashioned were now given a second life. These were now dug out and repaired and sold for good prices.

Starting about 1943 the government allowed the manufacture of a certain number of electronic components, principally tubes, for repair of domestic radios. These were marked "MR" which stood for "Maintenance and Repair". Some of these were rejects from military production lines. It was against the law to use these parts to build new sets. Most of the tubes were of the more popular types like the "All American Five" and found a ready market both in direct replacement and in rewiring tasks. Old stocks of tubes like 01A, UX99, 47, 50, etc., gathering dust suddenly found their way into the previously abandoned sets mentioned above.

Rewiring sets for different tube types was a very common and profitable business. If you look at certain tube types such as the 57, 78, 6D6, 6K7, 6SK7, loktal types, 6SG7, 12K7, and 12SK7 you will find that their performance is similar except for heater voltage, current and basing. The same is true for other tube categories. The rectifier tubes 5Y3 and 5Y4 are identical except for base wiring. Plug-in adapters were also good sellers when only base or wiring changes were needed (i.e., octal to Loktal). (Current radio collectors may run into some of these modified sets.)

Another popular modification was the conversion of automobile radios to home use by fitting them with AC power supplies. This was a good move since gasoline was strictly rationed during the war, an "A" ration sticker, for example, allowed a driver only about 3 gal. per week.

Another form of conversion was carried out on radio sets owned by German, and Italian nationals for security purposes. This was the

disconnecting or removal of the short wave bands on their sets. The theory was that these bands could be used by hostile foreign agents to communicate with their home land. Unfortunately not all of these "electronic vasectomies" were carried out neatly and some very good radios were ruined during the process. To further limit radio communication by foreign agents all amateur radio transmissions were halted except those conducted by the War Emergency Radio Service (WERS). In addition call-in musical request shows were taken off the air to prevent the use of song titles to convey espionage information to the enemy.

There were a number of "gimmicks" used by various radio repair men to get sets operating. Many of these are used by set restorers today. Typical of some of these expedients are, cleaning switches and volume control with cigarette lighter fluid, resurfacing of carbon controls using a soft lead pencil, universal line cord resistors to replace ballast tubes, recentering speaker cones by lifting up the voice coil dust shield and recentering the cone using shims (made by General Cement Co.), you could also recenter a shifted speaker cone by placing lines of cellulose cement radiating out from the voice coil to the rim opposite the side that was touching (When the cement dried it would shrink and pull the voice coil away from the magnet), resistor/capacitor networks could replace audio interstage and I.F. transformers, open filaments in some high heater voltage tubes (i.e., 35L6, 50L6) could be welded together by momentarily flashing the heater pins with 700 volts from a set transformer, etc.

It seemed that the day after V-J day thousands of parts suddenly became available, hoarders rapidly began unloading their stocks.

During the period from 1943 to 1944 until the time I was drafted I was fortunate in being able to work on many old interesting radios which were dug out of attics and garages and put into service. In looking back the experience I gained as a radio repairman in high school was very valuable. It didn't help me get into electronics in the Army, I landed in the Infantry, but it did lead me into a very interesting career in engineering which lasted 41 years. It also cultivated my interest in restoring old radios that I have been doing for the last 20 years.



A Twist of the Wrist **IT'S SET**

YELLOWTIP

MICROMETER ADJUSTING
CRYSTAL DETECTOR

The every-purpose detector—fixed or changeable adjustment, just as you desire. Tune with the **YELLOWTIP**. No hunting or looking for a sensitive spot—just "A Twist of the Wrist—It's Set". Micrometer adjustment in a moment, fixed indefinitely. Ideal for reflex and other circuits.

\$2

Write for folder and name of your nearest dealer.

WHOLESALE RADIO EQUIPMENT CO.
Exclusive Factory Representatives
38 WILLIAM ST., NEWARK, N. J.
Dealers and Jobbers write for attractive proposition.



Ear-Jay
\$1.00 a Pair

HEADPHONE CUSHION

HUDSON-ROSS
123 WEST MADISON ST., CHICAGO



DUCK'S
Big 256 Page No. 16 Radio Catalog mailed for 25c. in coin. The largest radio catalog published. Special prices on many radio items. Prompt service, or money refunded. Ever since the year 1909 Duck's catalog has always occupied the foremost position among radio catalogs. All radio books in catalog, except book on page 62 of our own publication, at half price—actually less than jobber's cost. Duck Bakelite knob and dial, 40c.; Navy Type Transformer \$12.00; Jr. Loose Coupler \$4.00; 3 ft. lengths highest grade spaghetti, 18c.

NOTE.—Our new location and internal changes give us admirable facilities to serve you promptly.

THE WILLIAM B. DUCK CO.
Dept. 3. 711-12 ADAMS ST., TOLEDO, OHIO

A Vintage Book Review: Service Data Fragments

Paul Joseph Bourbin

So you have decided that you want to bring one of your sets back to life yourself. Maybe you want to save a little money. Maybe you want to see what it is like to work on an old set. You have studied new and/or vintage repair books, bought some test equipment and a soldering gun (and maybe a cheap All-American Five AC/DC set on which to practice), practiced your soldering. Now you think you are ready to tackle your first set. Are you ready? Maybe.

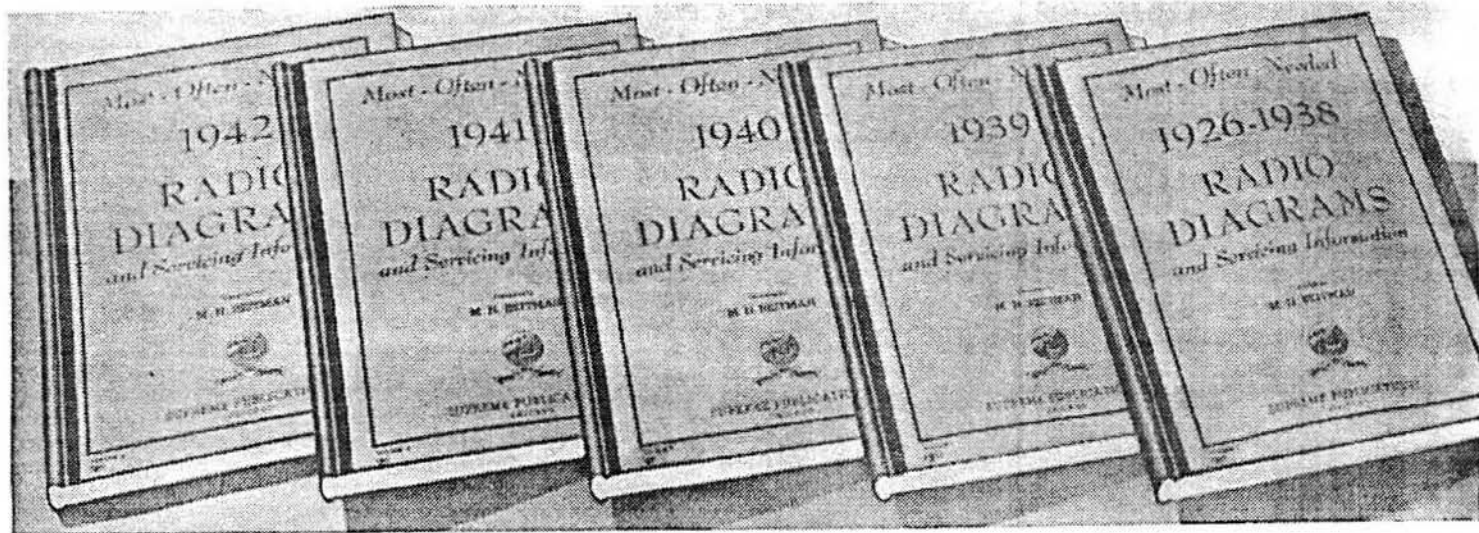
The circuitry of the set you have decided to repair may not be like the "typical set" schematics shown in the repair books. Voltages given in tube manuals often vary over a fairly considerable range, so you will not be able to ascertain the design voltage for that particular set. Sometimes resistances can be hard to figure, especially coils. Often you are curious about what is supposed to be going on in a circuit. For this information, you will need a schematic diagram, and, perhaps, voltage, resistance and alignment data as well. Occasionally, you will find a schematic glued somewhere on the set; most often, not. Now, what are you going to do? If you only intend to repair a few sets or are not sure if you will want to continue to repair your own sets, you can order a copy of the service data from one of the many providers who advertise this service. Unless your set is an unusual one, the few dollars you pay will get you all the information you will need. It is convenient, but does require some patience. Often, you will be in a hurry to dig into that set you just bought at the swap-meet or are

interested in its circuit design. You will not want to wait the few days that it will take to send for and receive the service data. You will have to acquire your own service data library.

For those of us who collect only one or two marques, one can generally find manufacturer's service data at the same places, and by the same methods, that we use to find old radios. An ad in one or more of the hobby magazines will usually turn up some material. The problem with this is that is hit-and-miss and one will have to spend a lot of time searching for necessary material.

There are also many of us who have general collections covering many marques over many years. Acquiring service data for even the large and well-known manufacturers will take a lot of time, space and money. An easier way is to acquire the various compendiums of service literature published during the Golden Age of radio. Various publishers have accumulated and published large amounts of service data from many manufacturers at various times. In this article, we will look at some of these.

Collectors of sets from the wireless and battery set eras are not blessed with many options. The earliest sets were either commercial or homemade amateur equipment. The commercial sets were serviced in-house, or by contract personnel who were trained by the wireless company. Amateur gear was serviced by the owner, however, amateurs often copied commercial equipment and one can often find clues in contemporary catalogues and magazines. Once broadcasting started in earnest, a



myriad of radio set and part manufacturers appeared, many of them were tiny and short-lived. Repairmen, throughout the twenties, would write to the manufacturers for service data for specific sets. Radio magazines of the period were filled with diagrams for the latest hook-ups. The sets designed in their laboratories were filled with parts made by their best advertisers (which, in turn, sold more advertising). Many homebrew sets can be traced to these magazine articles as well as factory-made sets. Probably the first attempt to consolidate this information was the Lefax Radio Handbook. This subscription service started in 1922 and a subscriber would receive "Radiofax" updates monthly. Unfortunately, the service only lasted a few years. It was in a small, loose-leaf format. As with any subscription service data, one must make sure that the binder is as complete as possible. Some people argue that battery sets were simple and the types of tubes available were few and, therefore, published service data is not necessary to repair these sets. This is only partly true, because many sets had strange quirks put into them by manufacturers and set designers to 1) give them a selling point to separate them from the rest, 2) to get around patents and 3) to protect a circuit or part from prying eyes (ie. the RCA Catacom). The first volumes of Rider's and Gernsback's publications did cover some of the sets made by some of the better-known manufacturers. More on those later in this article.

With the advent of AC powered sets and the proliferation of the superhetrodyne, sets were becoming much more complex. The need for service data increased along with the number of repairmen, sets and models. Publishers such as John F. Rider and Hugo Gernsback realized that comprehensive service manuals, containing information on all sets that the serviceman was likely to encounter, would be very useful. In 1929, John F. Rider published a book entitled: Trouble Shooter's Manual. This slim (by Rider's standards, it was only 3/4 inch thick) was the precursor of what was to come. About half of the book was devoted to troubleshooting information and the rest was devoted to schematic diagrams. In 1930, Hugo Gernsback published a similar, one-inch-thick book entitled: Official Radio Service Manual. In

1931, Rider published: "1931 Trouble Shooter's Manual." This manual was over twice the size of what preceded it. The first quarter was devoted to troubleshooting while the next 800 or so pages were schematic diagrams and specific service information. The race was on! Rider then republished the volume as Vol. I of Rider's Perpetual Trouble Shooter's Manual. Gernsback published Vol. II of his Official Radio Service Manual late in 1931. It covered 1931 and 1932 models. While both Rider and Gernsback depended upon manufacturers supplying service data, Rider's manuals always contained more data. It was probably this reason that servicemen preferred Rider's, given the number of each extant. Gernsback's manuals faded out in a few years while Rider went on strong. Early Rider's manuals can be a bit confusing. In addition to the different ones mentioned above, the first two volumes have two different numbering systems. The early volumes I & II were numbered sequentially, like a regular book. Later editions used the numbering system that started with Vol. III, that is, pages were numbered by volume and page within each specific manufacturer. Later editions also lacked the troubleshooting text. There are also minor variations in the data contained in different editions. When looking for indices for your particular set of Rider's make sure that the index has the numbering system that matches your particular set. Some had booth, while some had one or the other. Another variation is that of the cover type. One can find copies with the standard, blue Rider's cover and also covers with the names of various tube manufacturers and schools. Rider's manuals were only available through distributors and were often linked to tube promotions; buy a bunch of Sylvania tubes and get a Rider's manual with a Sylvania cover. The material between the covers is the same. Volumes I through V are scarcer than later volumes. One reason is that many collectors are only interested in sets covered by the first five volumes. Also, after a few years, Rider ceased to publish those volumes and offered an abridged edition containing the more common sets found in the first five volumes. A serviceman who started later on and wanted a complete set of back issues would get the abridged volume instead.

Another fairly uncommon variation is the binding of Vols. I to III and IV to VI together in one binder. These books are about nine inches thick! They are a bit unwieldy to use and are NOT abridged in any way. They contain all of the information available in the individual volumes. By the time they were published, Rider had eliminated the troubleshooting section. Rider continued to publish one or more volumes per year (except during WWII) up to Volume XXIII. When television got going, Rider also published a set of Perpetual TV Troubleshooting Manuals. These started out in the same format and were very thick. Later volumes were published in a larger page size. Some radio data was contained in the TV volumes. Rider also published a Public Address manual, a record changer manual and a series of auto radio manuals. Both Rider and Gernsback relied on material given to them by the manufacturers. Most manufacturers were glad to give them the information because it saved them from having to send individual packets to servicemen to servicemen who ordered them. However, not all manufacturers participated and those who did, often did not supply data on all models. Therefore, it is possible for one to have a set that is not listed. At the same time, many manufacturers still published their own service data, which may or may not vary from what is in Rider's. To make this even more interesting; even though Rider had more material than Gernsback, there are sets in Gernsback that are not in Rider! Both of the first volumes of Rider and Gernsback have data going back to the early twenties making them useful to those who collect sets from that era. However, they were many small manufacturers in the early twenties who never got their data into either manual. Another publisher of comprehensive radio manuals was Supreme Publications. Compiled by M. N. Beitman, these "Most Often Needed Radio Diagrams" contained similar material as Rider with one major difference. While each volume of Rider is four or more inches thick, Beitman's manuals are about 1/2 to 3/4 inch thick. This gives a idea of the difference in data contained in each. Beitman's manual was proportioned to contain the most common models each year. Beitman also published Record Changer, TV and troubleshooting

manuals, albeit much less complete compared to Rider. Like Rider and Gernsback, Beitman's first volume contains data for radios made years prior to publication. An interesting quirk anent Beitman is that the same volume can come in various cover colors. The data contained therein was the same. Why this was done, I do not know. These manuals were soft bound and were not loose leaf.

After World War II, another publisher came on the scene. Howard W. Sams & Co., Inc. started on April 11, 1946 to publish the famous Sam's Photofacts series of service data. Sam's represented a great departure from previous publishers. Sams was primarily a subscription service that supplied data in packets as soon as it was available. It was much more timely than others who issued a volume a few times a year. Sams' material was distributed in packets containing one or more models from various manufacturers. The packets could be filed either in loose-leaf binders or in file cabinets. Instead of being just dependant on what was given them by manufacturers, Sams actually got the sets, photographed them and traced the schematics. Much more material was offered than what had been offered by previous publishers. The unit and the chassis was photographed. Each component was numbered and the number was listed, the location identified in a photo and the number shown on the schematic. This made things much easier for the serviceman. A component could easily be found on the chassis, checked on the list for part number and general purpose replacements, and locate the component on the schematic. Furthermore, each schematic was drawn in a standard form so that each circuit appears in the same place on the diagram. This made it easier for servicemen to locate a specific circuit or subsection quickly. As circuits became more complex, especially with the advent of television, this was a real timesaver. Servicemen switched over to Sams fairly quickly. Rider tried to change, but could not quickly enough. This explains why Rider's manuals become scarcer starting with Vol. XVI or so. Sams, like Rider, also published a number of books to further the knowledge of the serviceman. These can be very informative to the vintage electronic hobbyist. Later on, Sam's started publishing Photofact Specialized Series covering different types of

electronic equipment. Sams is still in the business of providing electronic service technicians with the service data they need. Where Sams and Rider overlap, Sams has more models covered.

Sams was not alone in the post-war era. There were other series published. For example, Electronic Technician published their Tekfax series of schematics and Wallace Telaides, a large-format spiral bound series covered televisions by each manufacturer for a number of years. They were less expensive than Sams, but none endured.

What to own? It depends on what era of sets you like to collect, how much space you want to devote to service data and how serious you are about repairing your own sets. If you are interested in sets from the twenties, all you need is Rider's Vol. I, augmented, perhaps with Gernsback Vol. I and a collection of radio magazines of the era. While Radio News was the most popular of the magazines of the time, Radio, Radio Broadcast, Radio World and a host of others had many articles and diagrams of early sets. While not contemporary with the equipment, the Vintage Radio Identification Sketchbooks, by D. H. Moore (*see opposite page*), are very useful. Billed as being "Beyond Rider," they were compiled by him because the information was not available in the standard references. Unfortunately, they are currently out of print. However, the Perham Foundation plans to republish them in the future. Occasionally, sets turn up in the various hobby publications. If you collect sets from the end of World War II on, Sams is what you need. They do take a lot of space. Depending on the cut-off point of your collection, you will have to devote at least one file cabinet to them and, if your interest extends into the transistor era, a lot more. Sams still sell packets, but they are expensive. One can get an index and order individual packets from dealers found in the hobby magazines. Large libraries often have collections of Sams (and even Rider's) available. If your interest spans the entire era of radio, space will become the deciding factor. One need only have Rider's up to Vol. XVI or so (this will take over six feet of shelf space) because Sams takes over better from there. Beitman's take up little space, but never seem to have the model you need. They are

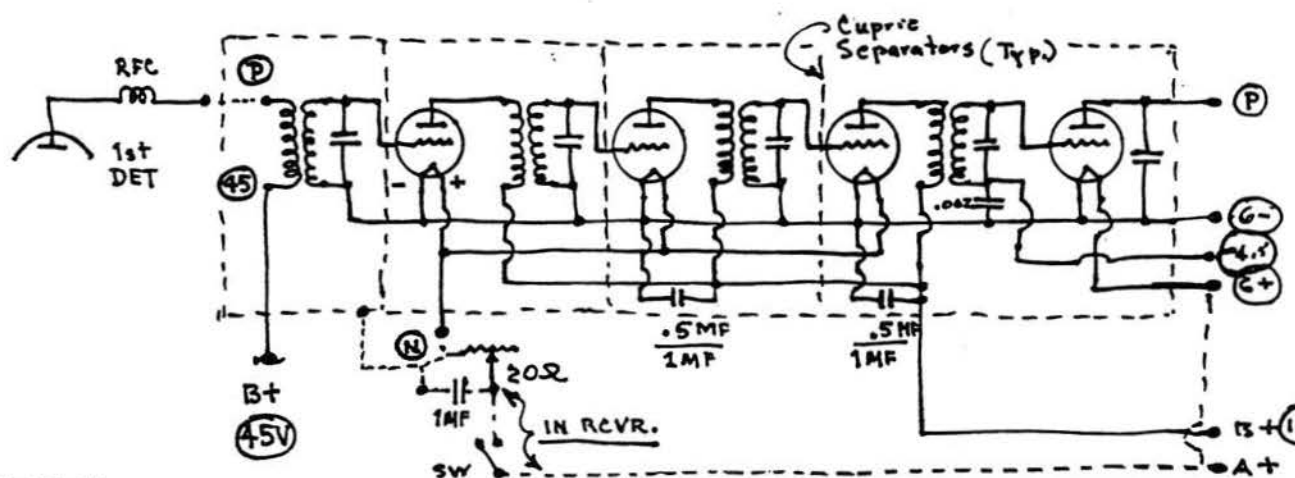
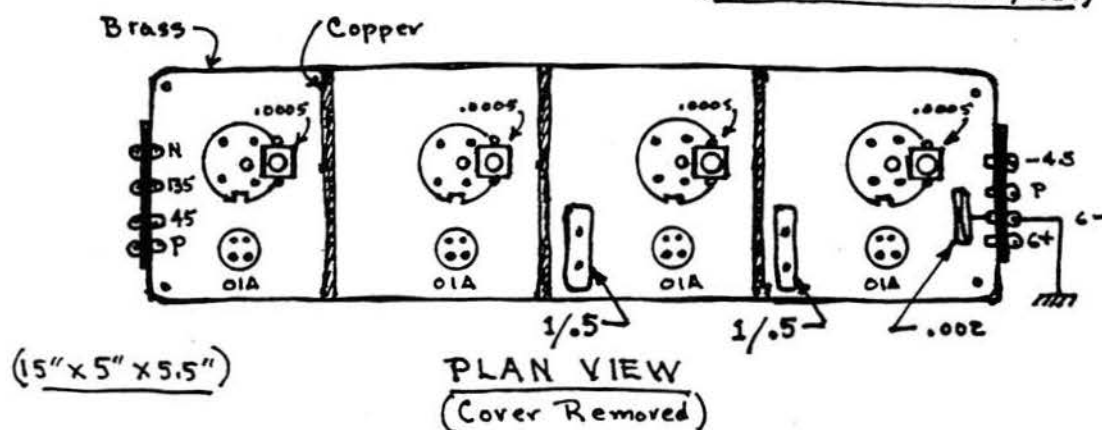
inexpensive at swap-meets etc., and if the set you have is in it, you could get the one you need. You then work on a few sets and see if repairing set is your cup of tea without investing a lot of money and space. Throughout the vintage radio era, manufacturers continued to publish their own service data for example: the RCA redbooks, Philco RMS Yearbooks and GE Service Manuals. If you have a few favorite marques, it is wise to get the manufacturer's service data because it is often more detailed than Rider's. Whatever service data you decide to acquire, it is very important to get an index. Some were in the volumes, but often they were published separately. Indices for Rider's and others can be gotten from Antique Electronic Supply, Puett and others. Without indices, finding what you want is very difficult even if you know when the set was made. For instance, service data for pre-war E. H. Scott sets was published in post-war Rider's.

In addition to instructive books published by Rider, Sams and others, there are many reference works that were published to aid the serviceman. Ghiraldi and Hicks published "kinks" books that showed actual "case histories" as reported by servicemen concerning individual models by manufacturer. These books were based upon the idea that specific design flaws or poor components would cause a large percentage of a certain model to exhibit the same problems. These books are very useful, especially when you get stuck. Chances are servicemen had the same problems with the set when it was almost new. All one has to do is look up the set by model and manufacturer, find the problem description and implement the solution. It is not all encompassing, but it helps. Also, most large manufacturers of parts and sets as well as the service data publishers, published newsletters that were meant to help the serviceman make quick repairs. These can be very informative.

As one can see, the collection of service data can become a hobby in itself. A well thought out collection of service data can enhance one's enjoyment of the hobby. Also, half the fun is doing it yourself. There is great satisfaction in bringing a dead set back to life.

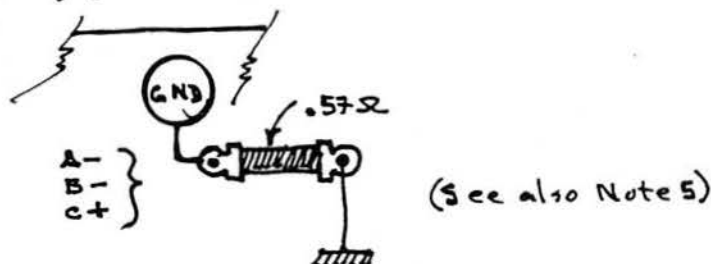
Copyright 1997, Paul Joseph Bourbin. All rights reserved.

SILVER-MARSHALL 112 KC AMPLIFIER (Intermediate Model, 1927)



NOTES:

1. (Later, & last model used (3) 22s & (1) 200A, along w/ 10Ω resistors in neg. leg of each 22 tube, & additional .5MF capacitor.)
2. Original chassis sth. = 23" x 10" x 1.5" for experimental revr. after first 112KC Time Signal amplifier proved commercially unfeasible. Eventually evolved into the Silver-Marshall 720-3G (screen-grid) AC model, 1929.
3. This is primarily a high-gain IF amplifier; Remler produced a better one in their "Infradyne 29" revr.
4. GND connexion of any revr. using this unit as shown must add the following configuration:



5. All shields grounded to NEG. of "A" Battery through mounting screw next to NEG.

Why Old Radio Don't Work

Herb Brams

People who have an old radio often wonder why it doesn't work. "Probably a tube," they think. "Just replace it and the set will work just fine." Well, I'm sorry to say that it's not that as simple as that. Radios have many different kinds of parts in them; tubes, resistors, capacitors, coils, transformers, speakers, switches, volume controls, etc. Many of these parts have gotten worn with use over the years or have just deteriorated with time to the point where they fail. As a result, an old radio is likely to have not just one problem, but many problems. Let's take a closer look at the various components of a radio and see what common problems occur.

Tubes: Tubes are surprisingly rugged and long-lived. If they've been used a long time they can get weak or burn out. However, while the set was working, the owner probably tested the tubes periodically and replaced the weak or burned out ones. Also, tubes do not go bad with age, so it is likely that there are only one or two bad tubes in a set.

Capacitors: These electronic parts are typically small round tubes of plastic or wax-coated paper with a wire coming out at each end. A radio may have anywhere from 8-50 of them depending on the complexity of the set. Due to their construction, capacitors have the highest failure rate of all the components in a set. Typically, the capacitors consist of two sheets of metal foil separated by a thin sheet of paper. Even though the capacitors are sealed in wax or a sheet of plastic, air and moisture get in and they deteriorate. Corrosion may break the connection between the wire leads and the foil; the capacitor then becomes "open." Electrolytic capacitors are a special type that have a moist paste in the paper. Eventually, the paste dries out and the capacitor does not work. Sometimes the two sheets of metal foil in capacitors touch, allowing unwanted electrical currents to pass through the connection. The capacitor is then said to be "shorted."

Resistors: Resistors are usually hard rods composed of carbon and other materials, brightly colored or with stripes to indicate their electrical value. A wire usually extends from each end. A radio may have anywhere from 10-55 resistors depending on the complexity of the set. Resistors seldom go bad, even on long storage. A few may change

in electrical characteristics to the point they do not function well. Some may "open up" (become disconnected inside). Sometimes, through the fault of another component in the set, too much electricity flows through a resistor and it burns up. Volume controls, tone controls, and some other controls are variable resistors. These usually wear out after long use.

Transformers, Coils, and Speakers: These are usually large items in a set, easily identifiable. Coils and transformers are often inside round or square cans to protect them. They consist of coils of wire, wound on a form, through which electrical currents flow. The trouble comes from the fact that sometimes the wire is very fine and it breaks, stopping the flow of current. Similarly, a tiny spot of dirt or residue may gradually eat away at the wire eventually causing it to open up. A fault in another part of the circuit may cause too much current to flow through the coil, causing it to burn out. Also, the wire may touch another piece of metal causing electricity to flow to a different, unwanted part of the circuit. This is an example of a "short."

Miscellaneous Components: Besides these components many other parts in a set can go bad. A common problem is the mechanical linkage connecting the tuning knob to the tuning capacitor. This is usually a cord or belt. Eventually, these break so that one cannot tune the radio.

Miscellaneous Problems: Besides the actual failure or change in characteristics of these components, other problems often arise.

Bad Connections: Some electrical connections consist simply of one metal part touching another metal part; e.g., the pins of a tube pressing against the contacts of a tube socket. With time, dirt may accumulate between the two pieces of metal or a layer of corrosion may form between them preventing a good electrical connection between them.

Bad Solder Joints: This problem often arises if at some time the set has been worked on by an unqualified person. To make a good electrical connection between the various components in a radio, a melted alloy, solder, is applied to the joint, binding it together. If this has not been done correctly, the parts may eventually separate, breaking the electrical connection between them. This is often difficult to detect visually; a meter or signal

tracer must be used to detect them. More troublesome are intermittents; weak connections that unexpectedly open up at odd times or under various conditions. These are probably the repairman's worst nightmare.

Mishandling: These are problems that arise simply from carelessness or ignorance. For example, a tube may have been put in the wrong socket, or one tube may have been misread for another (e.g. 6SQ7 for 6S7). An unqualified repairman may have replaced a bad part with a similar-looking one with different characteristics. To improve the performance of a poorly-working set, someone may have tampered with the tuning adjustments, making its performance still worse. Radio repairmen will usually have many fascinating tales of bizarre and unexpected problems they have encountered.

I hope that through this discussion I have made you more familiar with the various parts in a radio and what kinds of problems can arise. Even a small radio has many parts and so you can see how likely it is for an old set not to work. This is also why repair of an old radio can be time-consuming and expensive.



Loud \$1 Speaker

Radio Adapter

Hear all broadcasting through phonograph. Make your own horn. Attach B-R Phonadapter to YOUR phonograph. All can hear. Entire family, neighbors, guests can hear operas, lectures, latest news, with this adapter. Stretches over receiver of any standard type head-set and attaches to tone-arm of ANY phonograph. Made of soft, pure gum rubber. Quickly attached and removed. Thousands in use. Will not amplify or distort. For single receiver **\$.50**

For pair of receivers (more than twice the volume) **\$1**

Go to your dealer. If he cannot supply you send money order, check or currency at our risk. Prompt delivery—postpaid. Also send us name of favorite radio dealer.

The Beckley Ralston Company
1803 So. Michigan Ave., Chicago, Ill.

FREE




RADIO SET WITH DOUBLE HEAD PHONES

This wonder RADIO SET in special metal cabinet with double head phones complete ready to hook up **ABSOLUTELY FREE**

QUICK! Send only your name to-day for wonderful FREE RADIO PLAN.

GUARANTEE SALES CO.
26 Washington Place Dept. 116 New York

CHRS Welcomes New Members

An organization such as CHRS needs and welcomes new members. New members bring ideas and enthusiasm and keep the club interesting and fresh. Welcome!

David M. Knowlton—Nampa, ID
Robert E. Roller—Belmont, CA
Larry Cowles—Chino, CA
Mark Sabatini—Solvang, CA
Curt Philips—Pacifica, CA
Robert J. Toyer—Daly City, CA
Chat & Tess Alberto KC6111—Vallejo, CA
Fredrick Stone—Orange, CA
William Herndon—Half Moon Bay, CA
Mike W. Mount—Martin, TN
Bill Wray—San Francisco, CA
Ernie & Polly Sagesser—Coarsegold, CA
Gerald A. Morris—Oakland, CA
Donald J. Adams—Longmont, CO
Anthony Zugec—Rocklin, CA
Joseph S. Mayers—San Rafael, CA
Ordean Christianson—Mora, MN
H. Keith Coulter—Santa Barbara, CA

Barry Siembor—Woodville, WA
Gregory C. Greenwood WB6FZH—
Kaneohe, HI
Mike Harrod—Salinas, CA
William W. Smith W8NGV—Dayton, OH
Martin Kornblatt—Flushing, NY
Richard Bock—Fortuna, CA
Sam R. Burt—Fremont, CA
Earl M. Rayburn—Escondido, CA
Allen Dickson—Walnut Creek, CA
Chris J. Buttery—Concord, CA
Ramiz Alkass—San Jose, CA
Edward Wong—San Francisco, CA
Arthur Anchetta—Vallejo, CA
Lee Quilci—Reno, NV
Peat Banchieri—San Lorenzo, CA
James Burnett—San Francisco, CA
Paul A. Ward—North Fork, CA

Victor Moore—Redwood City, CA
Peter Chow N6YD—San Jose, CA
Shashi Kumar AD6CR—Fremont, CA
Frank Moore—Billings, MT
Donald L. Stewart—Santa Clara, CA
James H. Jacobsen—Palo Alto, CA
Jack Meyer—Athens, GA
Maynard M. Morris—Ukiah, CA
Robert Whalen—Newark, CA
Kelly Scott Molles—Stockton, CA
A. William Allen—Austin, TX
Don Kojane—Menlo Park, CA

Mme. Asta Souvornia, the "Bernhardt of Russia," in exile in New York in 1922, with her dog Buster. The set pictured was constructed by her two sons.





BARTHOLOMEW LEE
Attorney at Law
General Counsel to C.H.R.S.
88 Kearny Street, ste 1310
San Francisco, CA 94108
(415) 956 5959

December 1, 1997

Mr. James Meadows,
Executive Director, Presidio Trust
Presidio of San Francisco
San Francisco, CA 94123

Re Presidio Radio History partnership

Dear Mr. Meadows:

Congratulations on your appointment as Executive Director of the Presidio Trust. We are part of and represent a community partnership working with the National Park Service to preserve, explore, present and explain an important part of the history of the Presidio of San Francisco, namely its role in the development of radio and communications since 1899. This community partnership includes the Boy Scouts, the Perham Foundation, the Military Radio Collectors Amateur Radio Net and the California Historical Radio Society. Along with the Park Service, it has focused on research with the goal of rehabilitating one of the outstanding radio sites in the Presidio, the Army Coast Artillery station on Presidio Hill (building 1444). This project is well along, and we write to let you know of its success so far, in hopes of proceeding in partnership with the Trust.

We enclose a copy of the most recent Journal of the California Historical Radio Society, the cover of which is devoted to this project, as is a feature article. Also enclosed is a clipping from the Northern California Boy Scout newspaper, the Scouter. It too reports on the success of this project. This project is also the subject of an upcoming article in the National Park Services' Journal C R M, written by Park Historian Steve Haller, on the benefits of this community partnership with the Park Service.

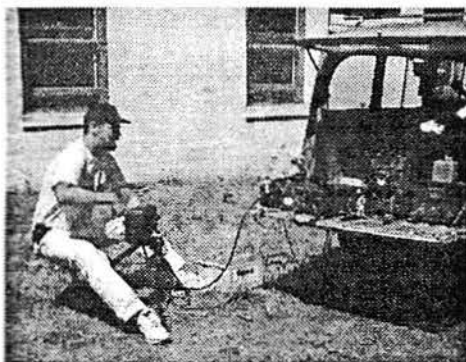
It is the ambition of the partnership to bring part of the history of the Presidio alive, while at the same time providing a nexus for community communications services ranging from amateur radio to "wireless cable" Presidio-wide television broadcasting from the site, consistent with its historical use. We expect that the site can generate revenue not only for its own maintenance, for also for the benefit of the larger Presidio community, while providing service for the larger community and enhancing the natural ecology of the site as well. Please let us know the next step to more fully inform you of this project and how we hope it will fit into the new Presidio.

Very truly yours,

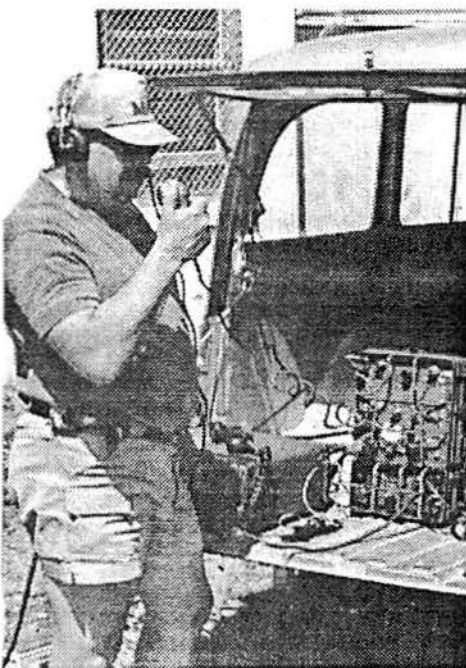
Historians at Work

Bart Lee, xWPE2DLT (415) 788-4072

San Francisco Cub Scouts power-up first new use of the Presidio's Coast Artillery radio station site, followed by military collectors on Armed Forces Day



Dick Dillman cranks GN-Y3 generator for GRC-9 radio



Alex, KB6IDO, Armed Forces Day, Presidio, 1997

The Presidio Trust has been formed. The CHRS, Perham Foundation and Scouts proposal has been forwarded to Mr. James Meadows, the newly-appointed Executive Director of the Trust, along with copies of the most recent Journal of the California Historical Radio Society. The transmittal letter is nearby. The Journal is also in the hands of each of the Trustees of the Presidio. On our side, architect Joseph Chow has begun the initial drawings for restoration of our site. We now need as many good ideas and volunteers as we can manage to press our case with the Presidio Trust, especially as to the generation of revenue as well as RF.

Further research into radio history at the Presidio has found the World War II work there of the 324th Signal Operation Company. An oral history interview with former Sgt. Richard Kain provided a wealth of new information. The company apparently operated out of the former Crissy Field aeronautical radio station. It communicated in Morse code only with our spies and agents, partisans, coast watchers, and our escaped and abandoned soldiers and sailors in the Pacific throughout the war. It almost always operated in plain language because most of the men it talked to had no code books. That station adopted amateur procedures and always sought to sound like an amateur radio station enjoying some forbidden wartime QSOs. Towards the end of the war, it maintained regular communications with submarine-borne commandos landed in the Japanese-held Philippines. Shortly after the war it set up the first teletype "hot line" with Moscow. Sgt. Kain said that counter espionage personnel during the war were never so much concerned with Nazi sympathizers as they were with communists.

We also now have a Kleinschmit tape from a Presidio operator S.J. Pickering of Seattle. He still uses the same sort of equipment he used at the Presidio on his amateur rig today: he keys it with a Boehme keying head and a Kleinschmit Perforator. A graphic of a piece of the tape he sent is nearby. A lucky find at the A.W.A. convention has provided a manual for all of the old keying equipment used at the Presidio Penthouse

where Sam worked his tricks.

The new Executive Director and the new trustees have been told of the work of the partnership for Presidio Radio History, and specifically that on April 19, 1997, Earth Day, members of the Boy Scouts, the California Historical Radio Society (CHRS), the Perham Foundation, and the Military Radio Collectors Radio Net, under the direction of Scouter and Commissioner Dr. Eric McHuron, geologist, worked with National Park Service personnel Eric Stewart and others, to restore native plant habitat on the San Francisco Presidio's Robb Hill, formerly and possibly soon again a Scout overnight camp site. After a morning of hard work, Alex Seddio, KB6IDO, and Paul Thekan, N6FEG, from the Military Collectors Radio Net, with the help of Cub Scouts and Boy Scouts, operated World War Two vintage radios for several hours. The Cubs and Boy Scouts enthusiastically cranked the hand generator as well as keyed-up the microphones. This Scout-powered activity put the Presidio "back on the air" as it was during one of its most interesting historical periods from one of its more interesting historical sites, the Coast Artillery Radio Station.

Park Historian Haller has also written an article on the Presidio Historical Radio Project for the National Park Service resources Journal C R M. The NPS is pleased that the Boy Scouts, with us as a community partner, applied in 1996 to the National Park Service to rehabilitate the Coast Artillery Radio Station site on top of the Presidio's Robb Hill. The Golden Gate National Recreation Area was pleased to receive the initial and follow-up applications from the lead partner, the Perham Foundation, as well as CHRS, and the Military Collectors. This application, facilitated by NPS Park Historian Steve Haller and other NPS personnel, was viewed favorably by the Superintendent of the Park, Brian O'Neill.

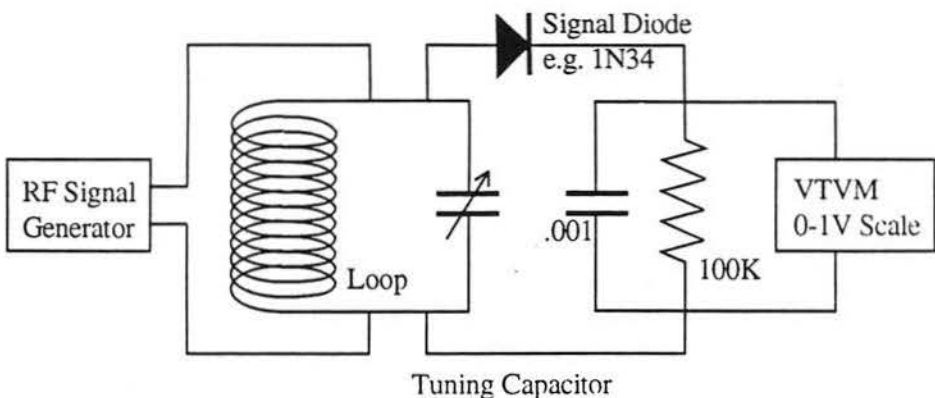
Dick Dillman, W6AWO, and Alex Seddio, KB6IDO, operated from our Presidio site on Armed Forces Day, working Bjorn Fosberg, SM5UR/W6, and Paul Thekan, N6FEG and others. Dick's note on this Field-Day Fine Business is nearby, along with a couple of photos. — 73 —

Replacing Antenna Loop Coils

Herb Brams

Antenna loop coils were often mounted on the back of radio sets and so were easily damaged. If it is necessary to replace a damaged or missing loop in an old set, the coil must be matched to the tuning capacitor in the set; otherwise, there may be oscillation problems or serious loss on sensitivity. Here's how one can adjust the loop to match the set. Disconnect the old loop. Attach a new loop or loopstick to the tuning capacitor, choosing a coil whose turns can be easily removed. Also attach an RF signal generator, diode network, and VTVM according to the schematic shown below. Turn the tuning capacitor to the lowest point on the dial, usually 540 kc (plates fully closed). Set the generator for highest output at about 540 kc and vary the frequency about this point. You should observe a peak at some point on the VTVM. If the peak falls at a frequency below 540 remove turns from the loop. The peak should now rise in frequency. Keep removing turns until the peak reaches 540 kc or the lowest frequency indicated on the radio dial. If it is impossible to turn the loop by this procedure, it may be necessary to add turns or try a different loop.

Here's how it works. The circuit shown is a simple crystal receiver with a voltmeter to indicate signal strength. The signal generator injects a radio-frequency signal into the circuit and the loop is adjusted to give maximum output at that frequency. The tuning capacitor can now correctly tune in signals over the entire band.



The Golden Age of Televisions

Review by Alsn Voorhees



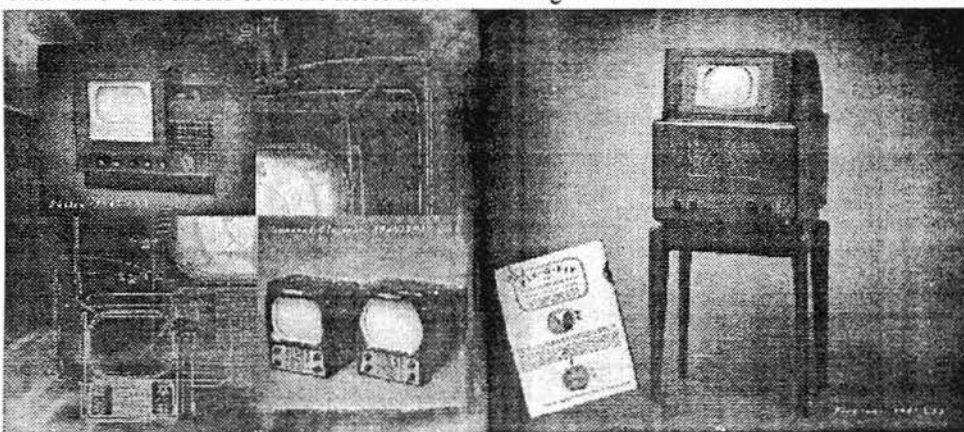
Philip Collins writes picture books. This isn't meant as a derogatory statement—he's good at it. Radio collectors have long cherished the sets so flawlessly pictured in "Radios: The Golden Age" and its sequel, "Radios Redux." Collins has also presented other photo books of popular culture with subjects such as smoking accessories and cocktails, also immaculately photographed.

This season presents us with two new volumes, "The Golden Age of Televisions" released in November, and "Radios: Furniture That Talks" that should be in the stores about

the time you read this.

"The Golden Age of Televisions" is a 130 page color book that shows a series of TVs, in chronological order, from the 1920s through 1990. Interspersed along with the photos are television related magazine covers, ads, novelty items, and a running chronology of television. It's fascinating to read what was on television through the years and be able to match it with the sets that people were using at the time to watch those programs. It's a fun book to have, even if you're not a collector, as it can bring to mind back the sets your family had as you grew up (unless, of course, you're a teenager now). It's also inexpensive, list priced at \$15.95.

The failing with this book, however, is that it doesn't tell us anything about the television sets themselves. They're the central focus, but nothing more is said about them other than the manufacturer, year produced, and country of origin. The milestones that some noteworthy sets, such as the Philco "Safari" are, aren't mentioned. It would have been nice to note, for example, that the white thing on the floor next to the Perdicta allowed



A typical spread from "The Golden Age of Televisions"

the picture tube to be separated from the chassis (which could be placed next to your easy chair for easy tuning), or why there's a radio sitting next to the '39 General Electric set.

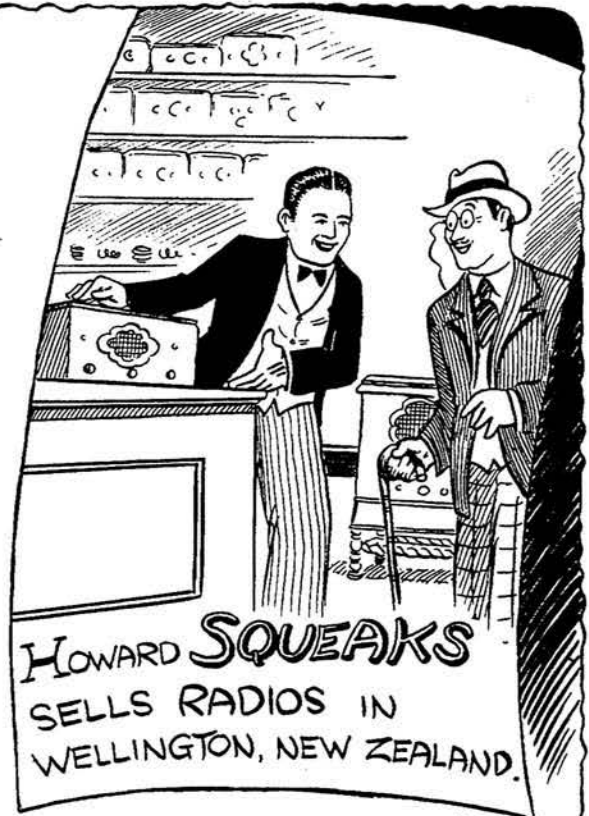
Grab up a copy at your local bookstore and spend an evening reminiscing about the televisions and the programs they brought us. It's a trip well worth taking.

RADIO FACTS and ODDITIES



THE EMPEROR NAPOLEON

CONFERRED UPON ALESSANDRO VOLTA, THE
ORDER OF THE LEGION OF HONOR, IN
RECOGNITION OF HIS INVENTION OF THE
PRIMARY CELL !!!



HOWARD SQUEAKS
SELLS RADIOS IN
WELLINGTON, NEW ZEALAND.



IN MANY FARMS AND ORCHARDS
IN GERMANY, INSECT PESTS ARE
EXTERMINATED BY MEANS OF
RADIO WAVES !!



THERE IS NO RADIO TRANSMISSION
FROM BROADCASTING STUDIOS !!!
THE PROGRAM IS REALLY CARRIED BY
TELEPHONE LINE TO THE ACTUAL
TRANSMITTING STATION AND THERE
TRANSFORMED INTO RADIO WAVES !!!

CONTENTS

About CHRS	2
The President's Message	3
Want Ads	6
Lord Haw Haw	8
Lone Ranger Test Recording	11
Kadette Tunemaster	12
Remote Control Without Wires	14
Radio Servicing During WWII	16
Vintage Book Review	18
D.H. Moore Sketchbooks	21
Why Old Radios Won't Work	22
New Members	23
Presido Update	24
Historians At Work	25
Replacing Antenna Coils	26
Golden Age of Televisions	27



Remote Control
Without Wires
See Page 12



P.O. Box 31659
San Francisco, CA 94131

415 978-9100

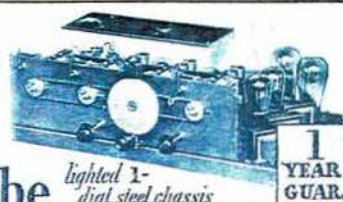
CHRS on the Internet:
<http://www.antiqueradios.com/chrs/>

FACTORY TO YOU—SAVE 50%—COMPARE WITH COSTLIEST OUTFITS BEFORE YOU BUY

- a powerful new Miraco ^{set or complete outfit} **30 DAYS FREE**
Electric or Battery



Get Our Send
No Money 10th
Anniversary
Offer!



9 tube ^{lighted 1-dial, steel chassis}
perfected SCREEN GRID-
latest PUSH-PULL Amplification

New SCREEN AERIAL
Console SUPER-
DYNAMIC
Cathedral Tone!

Masterpiece-built with
beautiful genuine walnut;
sparkling maple veneer;
4-way matched sliding
doors. Lignum top. Com-
pleted. NO REPAIRS. Aerial
makes outdoor aerial un-
necessary. Super-Dy-
namic Cathedral Tone
Reproduction.

Unit like—looks like—performs like newest sets in many outfits
up to \$2000! Latest, finest, costliest construction! Uses "225"
SCREEN GRID, "225" PUSH-PULL POWER, "225"
HUM-FREE POWER DETECTOR AND "225" RECTI-
FIER AC TUBES. Photograph pick-up connection. Local
Distance switch. Built-in power section on steel shielded
chassis. Lighted one-dial tuning. Range-edge selectivity;
super-dynamic cathedral tone quality; marvelous distance
getter. Solid one-year guarantee if you buy it for

Only \$49.88
COMPLETELY ASSEMBLED

Values possible because you
deal direct with big factory

MIRACO
TRADE MARK REGISTERED

CATHEDRAL TONED, SUPER SELECTIVE, POWERFUL DISTANCE GETTERS

You needn't send us a cent! Amer-
ica's big, old, reliable Radio Fac-
tory springs its 10th Anniversary
Surprise in high-grade, 1-year guar-
anteed sets at history's lowest prices!
With its latest
perfected Screen-
Grid, push-pull,
super-powered
and hum-free AC
electric Miraco's
—you are guar-
anteed satisfac-
tion, values and savings unsur-
passed. **Get Amazing Special Offer!**

At our risk compare a Miraco with
highest priced radios, for 30 days
in your home. Surprise and enter-
tain your friends *get their opinions!*
Unless 100% delighted, don't buy! Your
decision is final—no argument!
Only marvelously fine radios, of latest
perfected type, at rock-bottom prices, can
back up such a guarantee. Send postal or
coupon for *Amazing Special Factory Offer!*

Don't Confuse with Cheap Radios

With Miraco's rich, clear cathedral tone,
quiet operation, clear sharp separation in
nearby stations, trepidations "click" on
distant stations and latest improvements
—you'll be the envy of many who pay
2 or 3 times as much!
Send for proof
that delighted thou-
sands of Miraco
owners cut through
locals, get coast to
coast, with tone and
power of costly sets.
Miraco's are cus-
tom-built of finest
parts—products of
10 years' successful experience. Approved
by Radio's highest authorities.

User-Agents Wanted
Exclusive Territory—
Demonstrator Supplied
Spare or full time. No contract,
no experience required. Big
money! Send coupon now!

Deal Direct with Big Factory

Miraco outfits reach you splendidly
packed, rigidly tested *with everything in
place ready to plug in!* No assembling!
Entertain yourself 30 days—then decide.
Liberal one-year guarantee on each set.
Pay safe, save lots of money, insure
satisfaction—deal direct with Radio's
old, reliable builders of fine sets—10th
successful year. **SEND POSTAL OR
COUPON NOW for Amazing Offer!**

MIDWEST RADIO CORP., 401-AN Miraco Bldg., Cincinnati, Ohio

BEAUTIFULLY ILLUSTRATED LITERATURE, AMAZING SPECIAL FACTORY OFFER, TESTIMONY OF NEARBY USERS—

Dealers Write!
Miraco
Radio
get on
Coast to
Coast

Free!

MIDWEST RADIO CORPORATION
Power Builders of Sets—10th Successful Year
401-AN Miraco Bldg., Cincinnati, Ohio

THIS COUPON
IS NOT
AN ORDER

WITHOUT OBLIGATION, send latest literature, *Amazing Special Free Trial Wholesale*
Price List, testimony of nearby users, and all Postal, 2 User, 1 Agent, 1 Dealer.
☐ Check here if interested in an EXCLUSIVE TERRITORY PROPOSITION

NAME ADDRESS

Bulk Rate
U.S. Postage
PAID
Tiburon, CA
Permit No. 278